JOHN F. KENNEDY
SPACE CENTER

FO-K-0007V1-SC107
E.O. NO. M738474
CATEGORY I-B

RELEASED
FOR SC 107

SPACECRAFT OPERATIONS FOR SV
COUNTDOWN/COUNTDOWN DEMONSTRATION

THIS TCP CONTAINS HAZARDOUS OPERATIONS

PREPARED BY:
SPACE DIVISION OF NORTH AMERICAN ROCKWELL CORPORATION

PROJECT — APOLLO

PROCEDURE NO. K-0007V1-SC107
DATE 04 JUNE 1969
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EFFECTIVITY SC-107
RELEASING E.O. NO. M738474 (ORIG)
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APPROVED BY:
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OPERATIONAL PROCEDURES

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SEE ENCLOSED PCR FOR FINAL APPROVAL SIGNATURES.

REVISIONS

NO.	DATE	CHANGE	PAGES AFFECTED
(M738474) (BASIC)	06/04/69	TO INCORP. PCR NOS. 1-18,20-24	SEE PREVIOUS COVER
(M738491) (-1)	06/20/69	TO INCORP. PCR NOS. 25-36	SEE PREVIOUS COVER
(M748787) (-2)	07/03/69	TO INCORP. PCR NOS. 38-48	12-1,1A,3; 13-6; 15-2, 9,10,12; 19-2,5,10,10A, 11,13,13A,14,15,16,17,18,19,22,26,26A,32,35,36,37,38; 20-1,2,11,11A,12,13,14, 17,27,31,64,69,70,75,84,106,131,132,133; 21-2,16,16A; 22-5,6,7; 24-17

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(M738491) (-1)	06/20/69	TO INCORPORATE PCR NOS. 25-36	00-040,-071,-073,01-003 04-004,-015 thru-018
	04-025,-027,05-002,08-002thru-005,-009,-010,-012,-014,-015,-015A 09-001,-002,-004,-011,-012,-014,-020,-025,-030,-040,-041,-067,-078,		
	-080,-080A thru -080RR,-081,-082,-086,-116 thru -118,10-008,-011, -023,11-003,-006,-013 thru-015,-018,-019,-023,12-003,14-007,19-014,		
	-014A,-014B,-015,-033,-036,20-001,-002,-012,-013,-031,-041 thru -043,-077,-084,-117 thru -119,-130,21-001,-009,-013		

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SECTION I

GENERAL INFORMATION

1.0 TEST OBJECTIVES

1.1 LAUNCH COUNTDOWN..

A. TO PROVIDE THE SEQUENCE OF OPERATIONS REQUIRED TO PREPARE FOR LAUNCH.

B. TO LAUNCH THE SPACE VEHICLE.

1.2 COUNTDOWN DEMONSTRATION..,

A. TO PRACTICE LAUNCH COUNTDOWN OPERATIONS

B. TO VERIFY SPACE VEHICLE RF COMPATIBILITY (STRUCTURE AWAY)

2.0 LIST OF REFERENCES

2.1 DOCUMENTS..

NUMBERS	ORIGINATOR	TITLE
TCP-K-0042	NR	EDS TEST
TCP-K-0209V2	NR	EMERGENCY PROCEDURE DOCUMENT LC-39
TCP-K-10027	NR	GSE REMOVAL LC39
TCP-K-10026	NR	LC 39A CSM CABLE CHECKLIST
TCP-K-10004	NR	SPACECRAFT INSTALLATIONS AND REMOVALS
TCP-K-10019	NR	GSE INITIAL CONFIG SETUPS (MSOB)
TCP-K-10020	NR	GSE INITIAL CONFIGURATION SETUPS (LUT/LCC)
TCP-K-10021	NR	GSE INITIAL CONFIG SETUPS (MSS)
TCP-K-4617	NR	PYRO INSTALLATIONS
TCP-K-8247	NR	INSTRUMENTATION TEST DATA
TCP-K-10023	NR	GSE INITIAL CONFIG SETUPS (LC39)
	NASA	AS505 FLIGHT PLAN
TCP-K-3211	NR	SC SHAKEDOWN INSPECTION
TCP-K-3225	NR	FACILITY SHAKEDOWN INSPECTION
TCP-K-3300	NR	CREW COMPT STOWABLE EQUIP INSTL AND REMOVAL
TCP-K-4773	NR	LH2 AND LO2 DEWAR SERVICING
MA0201-5380	NR	PLACARDS AND LIMITATIONS, BLK II
MA0201-5422	NR	PRE-LAUNCH CLOSEOUT REQUIREMENTS
MA0201-5282	NR	ACE - S/C PROGRAMMING REQUIREMENTS
MA0203-0313		PAD SERVICING AND C/O REQMTS FOR CGSS

MSC-SPEC-C6B	MSC	CLEANLINESS PROCESS FOR APOLLO FLUID SYSTEM, PARTS AND ASSEMBLIES
MSFC-SPEC-234	MSFC	NITROGEN SPACE VEHICLE GRADE LIQUID AND GAS
MA0203-0346	NR	FUEL CELL POWER PLANT CHECK OUT, START UP PROCEDURE AND SHUTDOWN PROCEDURE FOR.
MSC-SPEC-C6B	MSC	NITROGEN, PROPELLANT PRESSURIZING AGENT
MSFC-SPEC-356	MSFC	HYDROGEN, LIQUID AND GAS
MSFC-SPEC-364A (MODIFIED)	MSFC	HELIUM
MSFC-SPEC-399A	MSFC	OXYGEN, LIQUID AND GAS
KMI 1710.1	KSC	THE KSC SAFETY PROGRAM
K-V-053VII	KSC	KSC APOLLO/SATURN V GROUND SAFETY PLAN, LC-39
AFTO 00-25-223	USAF	INTEGRATED PRESSURE SYSTEMS AND COMPONENTS
MA0617-903	NR	REQUIREMENTS AND PROCEDURES FOR IDENTIFICATION, CONTAMINATION CONTROL, INSPECTION AND SAFETY OF METAL FLEXIBLE HOSES
MA0206-821	NR	OPERATING PROCEDURES FOR WATER TRANSFER UNIT (S14-119)
MA0206-0300	NR	WATER SYSTEM SERVICING FUNCTIONAL TEST FOR S34-152
MA0102-101	NR	FABRICATION AND INSTALLATION OF RIGID AND FLEXIBLE TUBE ASSEMBLIES.
SPT-0003	MSC	CSM 106, TEST SPECIFICATION AND CRITERIA DOCUMENT FOR KSC.
PF-SPEC-1A	MSC	COMMAND MODULE/LUNAR MODULE POTABLE WATER SPECIFICATION

2.2 DRAWINGS..

NUMBER	ORIGINATOR	TITLE
G34-908102	NR	GSE FUNCTIONAL INTEGRATED SYSTEM SCHEMATICS, BLK II, VAB, LUT, LC-39.
G34-909102	NR	GSE FUNCTIONAL INTEGRATED SYSTEM SCHEMATICS, BLK II, PAD, MSS, LC-39.
G16-850129	NR	CABLES - RF TRANSMISSION LINE SET
V34-900101	NR	FUNCTIONAL INTEGRATED SYSTEM SCHEMATICS, CONTROLS AND DISPLAYS.
G16-848690A	NR	WATER TRANSFER UNIT ASSY - PORTABLE, LIGHTWEIGHT
G36-985134	NR	SCHEMATIC, TEST SET, WATER SYSTEM SERVICING ECS.
V36-610295	NR	AMPULE, CHLORINE INJECTOR ASSY OF
LSD LC-39 0007	NR	GSE CONFIGURATION
V36-7815XX (XX = S/C NO.)	NR	CABLES AND LINES - CREW COMPT, ROUTING AND INSTALLATION OF (LAUNCH MISSION RQMTS)
F0-1005XX (XX = S/C NO.)		CREW COMPARTMENT STOWABLE EQUIP.

3.0 LIST OF ABBREVIATIONS

3.1 ALL ABBREVIATIONS USED UNLESS OTHERWISE LISTED ARE FOUND IN THE FOLLOWING

3.1.1 NR DRM

3.1.2 NASA SP6001

4.0 TEST SUPPORT REQUIREMENTS

4.1 SPECIAL TOOLS AND TEST EQUIPMENT

NOMENCLATURE	MANUFACTURER AND/ OR PART NUMBER	APPLICATION
PLASTIC BAGS	MB0295-006	PROTECT TUBE ENDS, FITTINGS, ETC.
BLACK TAPE	MB0295-008	PROTECT TUBE ENDS, FITTINGS, ETC.
LEAK TEST SOLUTION	MIL-L-25567A	BUBBLE-TYPE LEAK TEST
TORQUE WRENCHES 200-250 IN. LBS. 100 IN. LBS. (BREAKOVER PREFERRED)		
1 1/2 IN. CROWS FOOT		SPS HE QD INSTL.
2 FLEX LINES CLEANED TO MA0610-017, LEVEL 2 OR BETTER	BB8BBXX-30G	JUMPER G36MV1 AND G36MV3 JUMPER G35MV1 AND G35MV3

NOTE

XX = 72 IN. MIN
144 IN. MAX

NYLON FILM	RCAS2400
MISSLE TAPE	3470
C02 ABSORBERS (4 EA)	ME901-0218-0061
DISTILLED WATER	MB0210-007
TEFLON STRIP	1/16'' X 1'' X 6''
HATCH ADAPTER	G14-848758

MILLIOHMMETER	MODEL 502 (KIETHLEY)	
SEAL PROTECTOR	9EH2191	
ALLEN WRENCH	5/32 INCH (NO. 10)	EMS TEST AND CO2 ABSORB INSTL
O-RING (2)	MD261-0002-0908	CABIN LEAK CHECK
SUIT FITTING	AIRLOCK - 9168	SAMPLE SUIT GAS FOR 02 PERCENT
GAS ANALYZER	BECKMAN D2 (2 EA)	SAMPLE SUIT GAS FOR 02 PERCENT
REGULATORS (2) 02 H2		REDUCE TUBE TANK PRESS TO TRANSFER UNITS 3000 1100 3000 TO 350
SEALS (8)	FAIRCHILD STRATUS 65-312-02 OR BEECH P/N 13532-4070-3	FLIGHT CAP SEALS
(2)	FAIRCHILD STRATUS 65-312-01 OR BEECH P/N 13532-4070-1	
Z00-066-801	SUPPORT BKTS	SM FC N2 FILL ACCESS
ADJUSTABLE TORQUE WRENCHES (15-30 FT. LB.) (1/4 IN. SQ. DRIVE)		PROPULSION DUST CAP TORQUE. (COUNTDOWN ONLY)
HE SPHERE WATER CATCHER	Z00-178	SPS HE SERV (CDDT ONLY)
Q.D. WRENCH	Z00-092-101	
POD WRENCH	Z00-156 (N36-824126)	TIGHTEN PODS
FACE SHIELDS (16)	FSN 4240-LC2-2323	HELIUM DISCONNECT AND CRYO OPS.
SAFETY BELTS		

RCS PRESS DISCONNECTS	8G14-840905-61 (2 EA. LEVEL 1)	CM RCS PROP TANK CLOSEOUT PRESSURE
WRENCH (1 IN.)		RCS GHE QD
WRENCH (1 1/2 IN.)		INSTALL/REMOVE
''B'' TOOL	V36-601400-11	HATCH CLOSING
TYGON TUBING ASSY (4 EA)	8G34-840459	EPS VACUUM CYCLE
THERMAL COVERING	MB0125-043	CM EXTERIOR
METHYL CHLOROFORM	O-T-620	CLEAN CM EXTERIOR
PHYSIO-SIMULATORS URINE DUMP NOZZEL	SCA 105021-2 V34-612550	BIO-MED
ADAPTER CABLES	SCA 105033	BIO-MED CABLE
GSE LIGHTWEIGHT HEADSETS (3 EA)	C-0072 OR AS0500	COMM SYSTEM C/O
Z00-158	COMPRESS TOOL	
Z00-159	W/G BLEED ASSY	
Z00-201	SCS H/C SUPPORT ASSY	SUPPORT H/C
Y00-113-101	SCS B/O BOX CABLE	CONTINGENCY
PSAAM B/O BOX	MX 115557	CONTINGENCY (G AND N)
PYRO ARM SW GUARD	V36-761903-21	GUARD FOR PYRO ARM SWITCHES
FLAME RETARDANT COTTON COVERALLS W/FULL LENGTH SLEEVES AND LEGS.		CRYO OPS.
ASBESTOS/DECHROMED LEATHER GLOVES		CRYO OPS.
TORQUE WRENCHES (0-150 IN-LBS) (0-300 IN-LBS)		TORQUING

VOI-SHAN SEALS (36 REQD)	VSF1015A4	
VOI-SHAN SEALS (24 REQD)	VSF1015A6	
VOI-SHAN SEALS (6 REQD)	VSF1015A8	
VOI-SHAN SEALS (6 REQD)	VSF1015A10	
VOI-SHAN SEALS (4 REQD)	VSF1015A12 CLEAN LEVEL 3,	
FLIGHT DRINK GUN	P/N 14-0131	H2O SERV (LAUNCH PRECOUNT)
BALANCE WEIGHT SCALE	(0-100 LBS)	
VOI-SHAN SEALS (12 REQD)	VSF1015S4 CLEAN LEVEL 3, MA0610-017	WATER LINE, C/M INTERIOR
SAFETY CONTAINER(S) (3) 5 GALS.		DRAIN H2O
Z00-172 VACUUM GAGE CAPS (1/4 INCH) (6 REQD)	CIRC PUMP (HASTINGS) AN929S4 (MA0610-017 LEVEL 3	SERV S14-119 VACUUM LEVEL READOUT LINE DISCONNECTION
PLUGS (1/4 INCH) (6 REQD)	MS24404S4 (MA0610-017 LEVEL 3)	LINE DISCONNECTION
POLYWIPES	WFP-503	
CATCH PANS	NR SUPPLIED	
BUCKET (3 GAL)		SUIT WICK GAS LEAK TEST
GROUND CABLE (6 REQD)		
Z00-192	HOSE ASSY PANEL	

ADDITIONAL ITEMS REQUIRED TO SUPPORT THIS TEST PROCEDURE ARE LISTED ON THE LSD LC39-0007

K-START TAPE LIST

F09C104-K10529	CNTDN G+N/SCS INTERFACE TEST
F09C104-K00067	LAUNCH ERASABLE LOAD
F09C104-K00068	MISSION ERASABLE LOAD
F09C104-K10538	CMC SELF TEST
F09C104-K00081	IMU PERFORMANCE
F09C104-K10527	GN AND C INTERFACE TEST
F09C104-K10531	G AND N OPERATIONAL

4.2 GROUND SUPPORT EQUIPMENT AND TEST EQUIPMENT FOR PRECOUNT AND COUNT.

NOTE

1. LEGEND X = REQUIRED
   0 = NOT REQUIRED
2. PRECOUNT COLUMN COVERS THE PERIOD FROM T-113 00 HOURS TO T-53 00 HRS
3. MIDCOUNT/COUNT COLUMN COVERS THE PERIOD FROM START OF SERVICING POWER UP (T-53 00) TO T-00 00.

PART NO.	NOMENCLATURE	STATION CALL	PRECOUNT	MID-COUNT/ COUNT
A14-037	ADAPTER AND DUCT SET			
A14-052	HEATER PWR SUPPLY	LPDS	0	X
A14-074	ELECTRICAL LOAD BANK	LPDS	X	X
A14-218	400 CPS PWR	LPDS	X	X
A14-237	ANTENNA COUPLER SET	-	X	0
A34-222	PROT. COVER SET-EPS RAD.	-	X	0
A34-243	DISC. SET, UMBILICAL	-	X	0
A34-316	HAND CONTROLLER MOUNT ASSY		X	X
A34-325	SIDE HATCH PROTECTOR	-	X	0
A34-329-101	PRESS TEST SET (2 EA.)	SWSU	X	X
A34-329-401	GHE PRESS REG PANEL	PLHM	X	X

A34-350	COVER (LES PORTION)			
A34-370	SUPPORT BRACKETS			
A34-377	C.B. GUARD (1 SET)	-	X	X
A34-388	PUGS ACCESS PANEL	SPAD	X	X
A34-413	SPANNER WRENCH	SCMT	X	X
C14-075	PROP PRESS UNIT	SFDS	X	X
C14-205	FILTER AND DISTRIBUTION UNIT	UFET	X	X
C14-232	DATA INTERLEAVING SYSTEM	UFET	X	X
C14-240	SERVICING EQUIPMENT ACE-S/C ADAPTER	SFET	X	0
C14-240	SERVICING EQUIPMENT ACE/SC ADAPTER	LFET	X	X
C14-261	LINE DRIVER	LFET	X	X
C14-267	EXTERNAL DTCS	UFET	X	X
C14-268	SERVICE EQUIPMENT DTCS	SFET	X	X
C14-300-101	FDS ELECT CONT SW UNIT	SFET	X	X
C14-316	SC GND FILTER	UFET	X	X
C14-339	LUT CABLE SET	SPAD	X	X
C14-340	MSS CABLE SET	SPAD	X	X
C14-346	SEQUENTIAL SYSTEM CONTROL UNIT	LFET	X	X
C14-348	RANGING TEST SET	MOLC	X	X
C14-352	SPS PUGS C/O EQUIP	SSET	X	X
C14-354	PYRO INITIATOR C/O BRIDGE SET	LFET	X	0

C14-389	ICTC MON/CONT	LFET	X	X
C14-442	RF CHECKOUT EQUIP	MOLC	X	X
C14-429	UP-DATA BME	MUDL	X	X
C14-481	DC GROUND POWER DISTRIBUTION UNIT	LPDS	X	X
C14-484	EXTERNAL SIGNAL CONDITIONING UNIT	LFET	X	X
C14-484	EXTERNAL SIGNAL CONDITIONING UNIT	SFET	X	X
C14-590	PURGE MONITOR AND CONTROL UNIT	SFET	X	X
C14-620	ELECT PWR DIST	SPDS	X	X
C14-621	BATTERY B/U UNIT	LPDS	X	X
C14-624	REDUND PWR SUP	LPDS	X	X
C14-626	PWR SUPPLY	LPDS	X	X
C14-626-101	PWR SUPPLY	SPDS	X	X
C14-628	RELAY AND PATCH DISTR	LPDS	X	X
C14-630	FDSCU	SHCU	O	X
C14-630	FDSCU (2)	SLHT	X	X
C14-630	FDSCU (2)	SLOT	X	X
C14-341	PAD ''A'' CABLE SET	SPAD	X	X
C34-380	PAD ''B'' CABLE SET	SPAD	X	X
C34-655	POWER SUPPLY	UFET	X	X
C34-664	MOBILE DATA RECORDER	LMDR	O	X
C34-670	SCS B/O BOX			
C34-707-101	EPS BUS MONITOR SYS	UFET	X	X

C34-708	ECS MTR SW CONT BOX	O	X

S14-009	HELIUM TRANSFER UNIT	SHTR	0	X
S14-132	FLUID DISTRIBUTION SYSTEM AS FOLLOWS..			
8G14-840112	LH2 VALVE BOX	SHFD	X	X
G37-844016	LH2 DEWAR VESSEL	SHFD	0	X
8G14-840111	LO2 VALVE BOX	SOMD	X	X
8G14-840023	CSM HELIUM VALVE BOX	SHVB	0	X
8G14-840099	SPS HELIUM VALVE BOX	SHVB	0	X
8G34-840383	SUPPORT BRACKET			
S14-026	LH2 TRANS UNIT	SLHM	X	X
S14-032	LO2 TRANS UNIT	SLOM	X	X
S14-053(2EA)	WATER GLYCOL TRIM CONTROL UNIT	UGCU	X	X
S14-053(2EA)	WATER GLYCOL TRIM UNIT	UGTR	X	X
S14-060	TOXIC VAPOR DISPOSAL UNIT (FUEL)	PFRS	X	X
S14-061	TOXIC VAPOR DISPOSAL UNIT (OXID)	PORS	X	X
S34-141	SCUPPER SET	SPAD	X	X
S14-113	VACUUM PUMP (LH2)	SHFD	X	0
S14-113	VACUUM PUMP (LOX)	SOMD	X	0
S14-119	WATER SERV UNIT	SWSU	X	
S14-121 (2 EA.)	W/G REFRIG. UNIT	UWGR	X	X
S23-114	PTC	UFET	X	X

S14-130	LUT 1 FDS	-	X	X
S14-140	W/G FILL UNIT	UGTR	X	X
S34-152	WICK SERV	UCMT	X	0
S34-163 (Z00-140)	CM LEAK TESTER	SCMT	0	X
S34-168	VACUUM PUMP	SWSU	X	0
S34-172	H2 DEWAR		0	X
S34-174	02 DEWAR		0	X

4.3 SPECIAL SUPPORT

GODDARD MILA USB STATION
S/D 40000 AND 40001
R/D 40000
HAZARD MONITOR SYSTEM (LC39)
COMMON USE RF CHECKOUT EQUIPMENT
ACE CONTROL ROOM
ACE COMPUTER COMPLEX
ACE FIRING ROOM (LCC)
OPEN LOOP COMM STATION
QLDS
CCTV
ASTRO COMM SYSTEM

SM DELUGE
PURGE SYSTEM
KSC SYSTEMS SAFETY
SECURITY SUPPORT
MEDICAL SUPPORT
TWC PAD RESCUE TEAM
EXPLOSIMETERS (2)
MSA MODEL 3
FUEL/OXID TOXIC
VAPOR DETECTORS (2)

GHE, 1 ''K'' BOTTLE	MSFC-SPEC-364A	
GASEOUS NITROGEN	MSFC-SPEC-234	SUPPLY SOURCE 2000 PSIG MIN (0-50 SCFM)
LIQUID OXYGEN	MSFC-SPEC-399A	OPERATING FLUID
LIQUID HYDROGEN	MSFC-SPEC-356	OPERATING FLUID
GN2	MSFC-SPEC-234	CABINET PURGE (SOURCE CAPABLE OF FLOWING UP TO 100 SCFM AT 125-150 PSIG
HELIUM	MSC-SPEC-C6B	PRESSURIZATION
GO2 TUBE TRAILER	MSFC-SPEC-399A	FDS PURGE AND F/C STARTUP (CONNECT TO S14-032)
GH2 TUBE TRAILER	MSFC-SPEC-356	FDS PURGE AND F/C STARTUP (CONNECT TO S14-026)

G02 ''K'' BOTTLE (2 EA)	MSFC-SPEC-399A	MSS LEVEL 4A REACTANT GAS BACKUP
G02 ''K'' BOTTLE (8 EA)	MSFC-SPEC-399A	ECS G02 SUPPLY
GH2 ''K'' BOTTLE (2 EA)	MSFC-SPEC-356	MSS LEVEL 4A REACTANT GAS BACKUP
GN2 ''K'' BOTTLE (2 EA)	MSFC-SPEC-234	MSS LEVEL 4A FCP GAS BACKUP AND POD PRESS BACKUP
GHE ''K'' BOTTLE (2 EA)	MSFC-SPEC-364A	MSS LEVEL 4A POD PRESS BACKUP.
FUEL WASTE TANKER AND HOSES	BENDIX	PAD LEVEL
OXID WASTE TANKER AND HOSES	BENDIX	PAD LEVEL
AUTOMATIC LN2 TANKER (BC4 OR BC8) VACUUM JACKET HOSE	BENDIX	PAD LEVEL (4000 GAL. MIN.)
HOKE SAMPLING BOTTLES (4 EA)	(WATERMELON)	LEVEL 4C
65-35 N2-02	BENDIX	CABIN PURGE

4.4 PERSONNEL

4.4.1 PERSONNEL REQUIRED TO SUPPORT THIS TEST ARE LISTED IN THE ''CALLS TO STATIONS''

4.4.2 PERSONNEL REQUIREMENTS ARE THE DIRECT RESPONSIBILITY OF SUPERVISION AND MAY BE CHANGED AS REQUIRED.

5.0 SAFETY REQUIREMENTS

5.1 GENERAL

5.1.1 SAFETY WILL BE CONSIDERED IN ALL PLANNING AND SCHEDULING AND IS THE DIRECT RESPONSIBILITY OF NASA AND NR SUPERVISION.

5.1.2 SUPERVISION IS RESPONSIBLE FOR PROVIDING SAFE WORKING CONDITIONS AND INSURING PERSONNEL COMPLIANCE WITH APPLICABLE SAFETY DIRECTIVES AND SPECIAL REQUIREMENTS.

5.1.3 THE TEST CONDUCTOR WILL INSURE COORDINATION OF ANY DEVIATION FROM ACCEPTED STANDARDS OR WRITTEN SAFETY REQUIREMENTS WITH NR SAFETY AND KSC SYSTEMS SAFETY.

5.1.4 SUPERVISION WILL INSURE THAT THE TEST AREA CONFORMS TO GOOD HOUSEKEEPING STANDARDS.

5.1.5 A WORKING KNOWLEDGE OF THE FOLLOWING DOCUMENTS AND PROCEDURES IS REQUIRED OF ALL PERSONNEL CONCERNED..

SECTION V - THIS DOCUMENT - EMERGENCY PROCEDURES
K-V-053 VOL II - APOLLO/SATURN V GROUND SAFETY PLAN, LC-39

SOP NO. 39-SV-9, LAUNCH PAD MAJOR EMERGENCY EVACUATION PLAN, LC-39.

SOP NO. 39-SC-2, SPACECRAFT FUEL CELL LIQUID OXYGEN SERVICING AND PRESSURIZATION.

SOP NO. 39-SC-3, SPACECRAFT LH2 SERVICING AND DEWAR TRANSPORTATION.

SOP NO. 39-SC-4, SPACECRAFT LO2 SERVICING, PRESSURIZATION AND DEWAR HANDLING.

SOP NO. 39-SC-7, SPACECRAFT HELIUM SERVICING

SOP NO. 39-SV-11, EED INSTALLATION, REMOVAL AND ELECTRICAL CONNECTION

SOP NO. 39-SV-13, S/C REMOTE BRIDGEWIRE RESISTANCE CHECKS (TJ AND LES MOTOR INITIATORS AND SLA SEP DETS)

KMI 1710.1 - THE KSC SAFETY PROGRAM

TCP-K-0209V2 - EMERGENCY PROCEDURES DOCUMENT, LC-39

5.1.6 DELUGE WILL BE CAPABLE OF INITIATION DURING THE TIME FRAME OF S/C HYPERGOLIC LOADING THRU LAUNCH.

5.1.7 THE SLA 10 PERCENT FREON/SLA EXTINGUISH (20 PERCENT FREON) PANELS ON LEVELS 3A AND 4A AND THE ''IU WATER DELUGE'' PANEL AT THE BASE OF THE EAST STAIRWAY OF THE MSS WILL BE OPERATIONAL AT ALL TIMES DURING HYPERGOLIC LOADING OF THE LM AND CSM UNTIL DISCONNECTED IN CDDT.

A. WHEN GAEC PERSONNAL ARE ON LEVEL 3A, CONTROL AND ACTUATION WILL BE FROM THAT LEVEL BY GAEC PERSONNEL.

B. WHEN GAEC PERSONNEL ARE NOT ON LEVEL 3A, CONTROL AND ACTUATION WILL BE FROM LEVEL 3A OR 4A BY NR FREON PANEL OPERATOR.

C. ACTIVATION OF EITHER ''10 PERCENT FREON'' OR ''SLA EXTINGUISH (20 PERCENT FREON)'' WILL REQUIRE THAT CONTROL PANEL POWER BE TURNED ON, THEN THE DESIRED ARM SWITCH FELD IN THE UP (OPEN) POSITION WHILE THE SYSTEM ACTIVATE SWITCH IS PLACE IN THE UP (OPEN) POSITION AND HELD FOR 3 SECONDS.

D. ACTUATION OF ''SLA WATER SPRAY (80 GPM)'' WILL BE BY THE GAEC OR NR PERSON ASSIGNED TO MAN THE FREON PANEL ON LEVEL 3A. ACTIVATION WILL BE AS SPECIFIED IN THE TCP EVACUATION OF LEVEL 3A. BOTH MANUAL VALVES ON THE SLA WATER SPRAY PANEL (LOCATED TO THE RIGHT JUST OUTSIDE 3A DOOR MUST BE TURNED ON.

5.1.8 IN THE EVENT THAT SPACECRAFT LEVELS ARE EVACUATED FOR A SM/SLA INTERIOR MAJOR HYPERGOLIC SPILL OR HYPERGOLIC FED UNCONTROLLABLE FIRE, THE FREON PANEL OPERATOR WILL, UPON EVACUATING S/C LEVEL, IMMEDIATELY PROCEED TO PAD LEVEL, MAN THE IU WATER DELUGE CONTROL PANEL AND ESTABLISH COMMUNICATIONS WITH CVTS (IF PERSONAL SAFETY IS NOT JEOPARDIZED). THE IU WATER DELUGE WILL BE ACTIVATED ONLY UPON DIRECT ORDER FROM CVTS. WHEN THE IU DELUGE IS ORDERED BY CVTS THE FREON PANEL OPERATOR WILL...

1. TURN IU DELUGE PANEL POWER SWITCH - ON

2. HOLD ARM SWITCH IN THE UP (OPEN) POSITION

3. PLACE ACTIVATE SWITCH IN THE UP (OPEN) POSITION AND HOLD FOR THREE SECONDS

NOTE

TO TURN OFF FREON OR IU WATER, BOTH THE ARM AND THE ACTIVATE SWITCHES MUST BE HELD TO OFF SIMULTANEOUSLY UNTIL THE NECESSARY VALVES GO FULLY CLOSED.

5.1.9 STATUS OF THE ''SUPERVISORY PANEL'' ON LEVEL ''G'' WILL BE CHECKED EVERY 4 TO 6 HOURS BY THE ''LEAD'' GAEC OR NR TECHNICIAN ACTIVE ON THE 3A LEVEL OR 4A LEVEL. HE WILL TURN ON THE SUPERVISORY PANEL READOUT SWITCH LONG ENOUGH TO VERIFY ALL VALVES ARE CLOSED (7REEN LIGHTS ON). STATUS WILL BE REPORTED THROUGH THE MSTC TO CVTS. THE SUPERVISORY PANEL READOUT SWITCH WILL REMAIN OFF AT ALL OTHER TIMES.

5.2 SPECIFIC HAZARDS

5.2.1 CRYOGENICS

5.2.1.1 FUEL CELL CRYO O2 AND H2 TANKS WILL BE SERVICED WITH LO2-LH2.

A. HAZARDOUS SEQUENCES - LO2-LH2 LOAD AND SAMPLE.

B. HAZARDOUS SEQUENCES LO2 AND LH2 PRESSURIZATION.

5.2.2 ORDNANCE

5.2.2.1 ORDNANCE OPERATIONS WILL BE CONDUCTED PER TCP-K-4617. REFER TO TCP-K-4617 FOR SPECIFIC HAZARDS AND SAFETY REQUIREMENTS.

5.2.3 PROPELLANTS

5.2.3.1 THE S/C WAS SERVICED WITH HYPERGOLIC PROPELLANTS AND PRESSURIZED PER TCP-K-0038 PRIOR TO LAUNCH COUNTDOWN. REFER TO TCP-K-0038 FOR SPECIFIC

HAZARDS AND SAFETY REQUIREMENTS.

5.2.3.2 DURING TCP-K-0007

A. HAZARDOUS SEQUENCES - S/C PROPELLANT TANKS WILL BE PRESSURIZED TO FLIGHT PRESSURES, ABOVE 50 PERCENT OF DESIGN BURST (LAUNCH).

B. HAZARDOUS SEQUENCES - HYPER DISCONNECT IN CDDT AND AFTER HELIUM SERVICING IN THE COUNTDOWN AND RECONNECT IN POST CDDT RECYCLE INCLUDES THE FOLLOWING TASKS..

(1) LOW POINT DRAIN (LAUNCH).

(2) DISCONNECT OF SERVICE STRUCTURE HYPERGOLIC INTERFACE LINES AT THE STUB TOWER (CDDT/LAUNCH).

(3) DISCONNECT OF THE TWO BENDIX PROPELLANT WASTE TANKERS (LAUNCH).

(4) DISCONNECT OF S14-060 AND 061 TVD UNITS AND LIQUID SEPARATORS AND BENDIX SUPPORT TO REMOVE THIS EQUIPMENT (LAUNCH).

(5) REMOVAL OF HYPERGOLIC LOW POINT DRAIN DRUMS BY BENDIX PERSONNEL.

5.2.4 HELIUM SERVICING

A. HAZARDOUS SEQUENCES - DURING PRESSURIZATION OF HELIUM SYSTEM TO GREATER THAN 25 PCT D.B., COMPLEX WILL BE CLEARED TO THE PERIMETER FENCE.

B. HAZARDOUS SEQUENCES - HELIUM QD DISCONNECT.

5.2.5 ENVIRONMENTAL

A. HAZARDOUS SEQUENCES - FLIGHT CREW INGRESS, HATCH CLOSEOUT.

B. FLIGHT CREW WILL PERFORM CDDT IN SEALED, OXYGEN ENRICHED CABIN WITH ONE LO2 TANK LOADED. ECS SURGE TANK WILL BE PRESSURIZED TO 350 PSIG (LESS THAN 25 PCT D.B.)

C. FLIGHT CREW WILL PERFORM CD AND LAUNCH IN PRESSURIZED, OXYGEN ENRICHED CABIN WITH CRYOS AND HYPERGOLICS LOADED, ORDNANCE INSTALLED AND

ELECTRICALLY CONNECTED AND PRESSURE VESSELS PRESSURIZED TO FLIGHT PRESSURES.

5.2.6 ELECTRICAL

5.2.6.1 VOLTAGE POTENTIALLY HAZARDOUS TO PERSONNEL AND EQUIPMENT IS PRESENT. APPLICABLE ELECTRICAL SAFE OPERATING PROCEDURES SHALL BE OBSERVED.

5.2.7 RADIOLOGICAL HAZARD

5.2.7.1 RADIOLUMINESCENT (RL) DISCS CONTAINING RADIOACTIVE ISOTOPE PROMETHIUM 147 ARE INSTALLED IN THE EVA HAND RAIL AND HANDLE ASSEMBLIES.

5.2.7.2 ALL PERSONNEL WITHIN AN AREA WHERE PERSONNEL COULD RECEIVE AN EXPOSURE IN EXCESS OF 2 MR/HR MUST WEAR BADGE FILM BADGES/DOSIMETERS.

5.2.7.3 DAMAGE TO AN RL DISC OR ANY DISCREPANCY INDICATING LOSS OF RADIOACTIVE MATERIAL WILL BE CAUSE FOR CESSATION OF WORK UNTIL SUCH LOSS IS ACCOUNTED FOR.

5.3 PERSONNEL REQUIREMENTS AND INSTRUCTIONS

5.3.1 SUPERVISION WILL INSURE THAT ONLY PROPERLY TRAINED AND QUALIFIED PERSONNEL PARTICIPATE IN OPERATIONS OR TASKS THAT ARE POTENTIALLY HAZARDOUS.

5.3.2 PERSONNEL INVOLVED IN THIS PROCEDURE WILL BE INFORMED AT PRE-TEST BRIEFING OF THE SPECIFIC HAZARDS TO BE ENCOUNTERED.

5.3.3 ALL CRYOGENIC OPERATIONS SHALL BE PERFORMED BY TWO OR MORE PERSONS IN WORKING TEAMS (BUDDY SYSTEM).

5.3.4 PERSONNEL SHALL STAND CLEAR OF VENTS, EXHAUST, OR OPEN PORTS WHEN PRESSURE MAY BE RELEASED.

5.3.5 KSC SYSTEM SAFETY CONCURRENCE IS REQUIRED PRIOR TO STARTING PROCEDURES CONTAINING HAZARDOUS OPERATIONS, PRIOR TO HAZARDOUS STEPS/SEQUENCES AND PRIOR TO OPENING THE CONTROL AREA FOR NORMAL WORK AT CONCLUSION OF HAZARDOUS ACTIVITES.

5.3.6 NR SAFETY ENGINEER WILL SUPPORT HAZARDOUS PORTIONS OF THIS PROCEDURE. THE CALL SIGN IS SNRS.

5.3.7 NR INDUSTRIAL SAFETY REP WILL MONITOR RADIOLOGICAL

HAZARD TASKS. THE CALL SIGN IS SNRS (RAD).

5.3.8 PROTECTIVE CLOTHING REQUIREMENTS MAY BE DOWNGRADED FROM SCAPE TO SPASH, WITH SCAPE BACKUP, AFTER THE HYPERGOLIC HAZARD HAS BEEN EVALUATED, WITH CONCURRANCE OF KSC SYSTEMS SAFETY AND NR SAFETY.

5.4 SPECIAL REQUIREMENTS

5.4.1 ISOLATE (IF POSSIBLE) AND DEPRESSURIZE THE AFFECTED PORTION OF THE PRESSURIZED SYSTEM TO WORK ON LINES OR COMPONENTS.

5.4.2 FLEX LINES WILL BE CONSTRAINED IN ACCORDANCE WITH AFTO 00-25-223/MA0617-903. IN ADDITION, FLEX LINES PRESSURIZED TO 150 PSIG OR GREATER, MUST BE SECURED AT EACH END, ACROSS EACH UNION AND AT LEAST EVERY SIX FEET OF LENGTH.

5.4.3 PRIOR TO INITIATING ANY CRYOGENIC TRANSFER OPERATION, ALL SYSTEM COMPONENTS SHALL BE CONNECTED TO FACILITY GROUND. THE GROUNDING CABLE WILL FIRST BE ATTACHED TO THE VEHICLE/EQUIPMENT AND THEN TO GROUND.

5.4.4 INDISCRIMINATE OPERATION OF SWITCHES AND CONTROLS SHALL NOT BE PERMITTED.

5.4.5 EXTREME CAUTION SHALL BE EXERCISED TO PREVENT OILS, GREASES, FUEL OR OTHER COMBUSTIBLE MATERIALS FROM COMING INTO CONTACT WITH LIQUID OXYGEN.

5.5 EMERGENCY EGRESS AND RESCUE RESPONSIBILITY

NR HAS THE RESPONSIBILITY FOR AIDING IN EGRESS/ RESCUE AT SPACECRAFT WHITE ROOM THROUGHOUT LAUNCH COMPLEX TESTING ACTIVITIES. DURING THE COUNTDOWN DEMONSTRATION TEST AND DURING THE ACTUAL COUNTDOWN NR HAS THE RESPONSIBILITY FOR EGRESS/RESCUE AIDING UNTIL SUCH TIME AS NR PERSONNEL GET OFF THE LAUNCHER UMBILICAL TOWER IN PREPARATION FOR LEAVING THE PAD. AT THAT TIME RESPONSIBILITY WILL REVERT TO THE TWC PAD EGRESS TEAMS. UPON RETURN TO THE PAD FOR NORMAL POST CDDT TESTING, NR WILL AGAIN ASSUME RESPONSIBILITY FOR RESCUE AND EGRESS ACTIVITIES.

5.6 CLOSEOUT CREW CLOTHING REQUIREMENTS.

ALL.. NOMEX COVERALL (WITH HOOD), UNDERWEAR,

GLOVES AND SOCKS., MSA PRESSED FIBER ''COMFO-CAP''., AND DACRON OVER-THE-SHOE BOOTIES.

SPAD, SCMT, SGQC.. ANKLE HEIGHT, NON-SPARK SOLE SHOES (BOOTIE WILL BE WORN OVER THE SHOE WHEN IN THE WHITE ROOM).

BSCMP, SSSA, SSSB.. DACRON SOFT HAT (TO BE WORN INSIDE CM)., LOW CUT FLAME RETARDANT TREATED TENNIS SHOES (BOOTIE WILL BE WORN AT ALL TIMES EXCEPT WHEN WEARER IS INSIDE CM).

6.0 INSTRUCTIONS

6.1 STANDARD INSTURCTIONS

6.1.1 GENERAL

A. IN THE EVENT OF A TEST HOLD OR TO CONSERVE OPERATING TIME, SYSTEM SHUTDOWN MAY BE ACCOMPLISHED AT THE DISCRETION OF SYSTEM ENGINEERS WITH CONCURRENCE OF MTPE AND MSTC.

B. CONTROL OF THE SLA FREON/SLA EXTINGUISH CONTROL PANEL SHALL BE ACCOMPLISHED AS FOLLOWS..

1. TURN KEY TO ENERGIZE PANEL. (TURN KEY ONLY WHEN SYSTEM ACTIVATION IS DESIRED.)

2. PLACE ARM SWITCH ON DESIRED SYSTEM TO OPEN (UP) AND HOLD.

3. PLACE ACTIVATE SWITCH TO OPEN (UP) POSITION AND HOLD FOR 3 SECONDS.

4. BOTH SWITCHES MAY BE RELE1SED AFTER SYSTEMS ACTIVATION.

6.1.2 ECS

A. MECS MAY SELECT TRIM UNITS AND REFRIG UNITS TO MAINTAIN EQUAL RUN TIME. UNIT DIRECTLY SUPPORTING S/C w/G CIRCULATION WILL BE DESIGNATED AS PRIMARY.

B. TRIM UNIT TEMP CONTROLS MAY BE ADJUSTED TO MAINTAIN 57 +/- 17 DEG AT SC EVAP OUTLET. FLOw RATES MAY BE ADJUSTED TO MAINTAIN 200-10/+ 50 LBS/HR.

C. ACCUMULATOR QUANTITY ADJ (PRI/SEC) WILL BE PERFORMED AT DIRECTION OF MECS WITH MTPE CONCURRANCE TO MAINTAIN QUANTITY OF 30-70 PCT ON SEC OR 20-48 ON PRIM.

D. MECS MAY TRANSFER WATER GLYCOL GSE FROM LOCAL TO REMOTE AND FROM REMOTE TO LOCAL AT THE DIRECTION OF MTPE TO SUPPORT TESTING.

E. GSE PRESSURE REGULATORS WILL BE ADJUSTED TO

MAINTAIN SYSTEM PRESSURES WITHIN LAST SPECIFIED TOLERANCE.

F. THE TAIR BOOK MUST BE PRESENT WITH THE S14-119 WATER TRANSFER UNIT FOR THIS TEST. THE BOOK MUST CONTAIN PERTINENT INFORMATION NECESSARY TO ACCOMPLISH THE TEST.

G. FLEX HOSES MAY BE SUBSTITUTED PER TD 68-1.

H. ALL WATER SAMPLES FOR MSC WILL BE SHIPPED BY TWA ENVIRONMENTAL HEALTH AND WILL REQUIRE NO QC ACCEPTANCE OF RESULTS.

I. VALVES MAY BE READJUSTED IN SUPPORT OF CREW FUNCTIONS.

J. DRAINING OF POTABLE WATER TANK MAY BE PERFORMED AT DIRECTION OF MECS.

K. WHERE UNACCEPTABLE H20 SAMPLE RESULTS ARE OBTAINED FROM THE S14-119, CHANGE THE DISPOSABLE PUMP FILTER AND RECIRCULATE H20 FOR ONE HOUR MINIMUM.

L. TO MEET WEEKLY CIRCULATION REQUIREMENTS, THE FOLLOWING WILL BE PERFORMED WITH MECS DIRECTION AND MSTC/MTPE CONCURRENCE..

PANEL 2

SEC COOLANT LOOP PUMP SW - AC 1
(START TIME _____)

AFTER 1 HOUR (MINIMUM) PERFORM FOLLOWING..

PANEL 2

SEC COOLANT LOOP PUMP SW - OFF (CENTER)
(TIME _____)

M. POTABLE AND WASTE WATER SYSTEM SAMPLING

NOTE

TWA ENVIRONMENTAL HEALTH
PERSONNEL WILL BE RESPONSIBLE

FOR SAMPLE ANALYSIS, SAMPLE BOTTLES, SAMPLING TECHNIQUE AND HOOKUP EQUIPMENT TO SAMPLING PORTS (POTABLE WATER SAMPLER OR WORK AROUND).

NOTE

MSC SAMPLING DOES NOT REQUIRE QC ACCEPTANCE.

NOTE

WATER SAMPLES WILL BE TAKEN FROM THE WATER GUN ASSY. AND FROM THE FOOD PREP VALVE. THE SAMPLES WILL BE ANALYZED PER PF-SPEC-1A, TEST POINT 4.

TWA ENVIRONMENTAL HEALTH PERSONNEL WILL ACCOMPLISH THE SAMPLING OPERATIONS. QUANTITIES TO BE DETERMINED BY TWA ENVIRONMENTAL HEALTH TO MEET SAMPLING REQUIREMENTS.

N. ACCUMULATED OPERATING TIME OF THE CO2 ABSORBERS WILL NOT EXCEED 2 HOURS WITH SUIT CIRCUIT UNMANNED, SEPARATOR WICKS UNSERVICED AND THE SUIT COMPRESSORS OPERATING.

6.1.3 EPS

A. MEPS WILL MOMENTARILY CLOSE BATTERY C.B. TO READ BATT TERMINAL VOLTS WITH CONCURRENCE OF MTPE/MSTC.

B. LPDS/SPDS WILL CHARGE BACKUP BATTERIES TO MAINTAIN THEIR CHARGE AT THE DIRECTION OF MEPS/CSGS, WITH CONCURRENCE OF MTPE/MSTC.

C. IF AN OVERVOLTAGE CONDITION OCCURS WHEN AC STARTS ARE SENT TO POWER SUPPLIES A OR B, AC STARTS WILL BE COMMANDED OFF PS ADJUSTED, THEN ON AGAIN AND PS READJUSTED.

D. CM LIGHTING MAY BE TURNED OFF/ON TO SUPPORT

CREW AND SYSTEMS TESTING. ALL SYSTEMS WILL NOTIFY EPS WHEN THEY TURN OFF/ON CM LIGHTING.

E. BATTERY ENABLE FOR GND PS A AND B (R100, R101) MAY BE INITIATED WHEN GND PS CURRENT REACHES 15 +/- 5 AMPS ON EITHER GND POWER SUPPLY.

F. THE A14-074 LOADS MAY BE ADDED OR REMOVED AT THE DIRECTION OF MEPS WITH CONCURRENCE OF MTPE/MSTC.

G. BATTERIES WILL BE CHARGED WHEN AND AS LONG AS NECESSARY PER EPS OPTIONAL PROCEDURES AT DIRECTION OF EPS WITH CONCURRENCE OF MSTC/MTPE.

H. MEPS WILL ADJUST EXTERNAL POWER SUPPLIES TO MAINTAIN NOMINAL BUS VOLTAGE WITH MSTC/MTPE CONCURRENCE.

I. MEPS MAY REQUEST GSE FM/FM CALIBRATE COMMANDS FROM MACE AT ANY TIME BEFORE OR DURING S/C TESTING.

6.1.4 SEQUENTIAL

A. C AND W SYSTEM MAY BE RESET WITH CONCURRENCE OF MTPE/MSTC.

B. EDS POWER (PNL 7) MAY BE TURNED OFF/ON TO CONSERVE BAT DRAIN WITH MSEQ/MTPE CONCURRENCE.

C. C/W NORMAL SW (PANEL 2) MAY BE POSITIONED TO NORMAL OR ACK WITH CONCURRENCE OF MTPE/MSTC.

NOTE

NO CAUTION/WARNING MATRIX LAMP SHALL BE LEFT LIGHTED CONTINUOUSLY FOR MORE THAN 30 MINUTES EXCEPT WHEN A CRITICAL TEST IS IN PROGRESS. WHEN THE CAUTION/WARNING SYSTEM IS USED ONLY FOR MONITORING, IT WILL BE OPERATED IN THE ACK. (ACKNOWLEDGE) MODE.

D. ALL SYSTEM ENGINEERS AND CM TECHNICIANS REPORT

MASTER ALARMS AT THE TIME THEY OCCUR TO THE MSEQ/MSTC. MTPE/MSTC WILL NOTIFY MSEQ OF ALL MASTER ALARMS AND OF EITHER THE CAUSE OF THE MASTER ALARM OR THE IDR NUMBER FOR AN UNEXPLAINED MASTER ALARM. MSEQ WILL ANNOTATE RECORDER 13 FOR ALL MASTER ALARMS WITH THE ABOVE INFORMATION. WHEN AN UNEXPLAINED MASTER ALARM OCCURS, ALL OPERATING RECORDERS WILL BE ANNOTATED ''UNEXPLAINED MASTER ALARM'' BY THE RESPONSIBLE SYSTEM ENGINEERS.

6.1.5 BIO-MED

A. (RESERVED)

6.1.6 FUEL CELL/CRYOGENICS

A. FUEL CELLS MAY BE PLACED ON AND OFF SC BUSSES AT DIRECTION OF MLFC AND MEPS WITH CONCURRENCE MTPE AND MSTC.

B. C-START INSERTS MAY BE RE-EXECUTED BY MLFC FOR MULTIPLE VALVE INSERTS ON C060.

C. K-BOTTLES MAY BE CHANGED AT MLFC DIRECTION.

D. APPROPRIATE FUEL CELL PURGE VALVES MAY BE OPENED AND CLOSED AT DIRECTION OF MLFC, TO VENT CRYO TANK PRESSURES.

E. APPROPRIATE CRYO TANK HEATERS AND FANS MAY BE CYCLED, WITH MTPE/MSTC CONCURRENCE, TO CONTROL TANK QUANTITY AND TO PROVIDE ECS WITH ADEQUATE SURGE TANK PRESSURE.

F. APPROPRIATE CRYO TANK VENT PODS MAY BE OPENED AND CLOSED, AT DIRECTION OF MLFC, TO VENT TANK PRESSURES.

6.1.7 SPS

A. SPS PROPELLANT DISCONNECTS WILL BE OPERATED AS FOLLOWS..

1. DISCONNECTING GROUND-HALF COUPLINGS FROM AIRBORNE-HALF COUPLINGS.

A) VERIFY/CLOSE GROUND-HALF COUPLING

WITH BODY OF COUPLING AND POINTING TOWARD S/C). CLOSE DIRECTION IS MARKED ON HANDLE.

CAUTION

EXTREME CARE SHOULD BE TAKEN WHEN DISENGAGING Q.D.'S TO PREVENT DAMAGE TO SEALING AND MATING SURFACES.

B) INSTALL TOOL Z00-092-101 ON FWD SLEEVE OF GROUND-HALF.

WARNING

SHOULD LEAK OCCUR DURING NEXT STEP, DEPRESS BALL AND ROTATE GROUND-HALF COUPLING CW UNTIL SLOT IS AGAINST STOP. DO NOT EXCEED 300 IN. LB. TORQUE.

C) UTILIZE TORQUE WRENCH/Z00-092-101 AND ROTATE GROUND-HALF (FWD SLEEVE) CCW APPROX. 3/4 INCH UNTIL BALL IS POSITIONED IN DETENT. VERIFY NO VISIBLE LEAKS. ADVISE MAXIMUM TORQUE OBTAINED.

D) DEPRESS BALL AND ROTATE GROUND-HALF COUPLING CCW UNTIL SLOT IS AGAINST STOP AND PULL GROUND-HALF AWAY FROM AIRBORNE COUPLING.

E) INSPECT AIRBORNE-HALF COUPLING FOR FOREIGN MATERIAL AND VERIFY NO VISIBLE LEAKS. RINSE FACE OF COUPLING. (ISOPROPYL ALCOHOL ON FUEL SIDE, FREON TF ON OXIDIZER SIDE).

F) INSPECT AND RINSE AIRBORNE-HALF COUPLING DUST CAP AND INSTALL BY ALIGNING INDEX SLOTS AND ROTATING DUST CAP CW APPROX. 1 INCH UNTIL TIGHT.

2. CONNECTING GROUND-HALF COUPLING TO PURGE LOOP.

A) VERIFY/CLOSE GROUND-HALF COUPLING (FULLY CW).

B) REMOVE PURGE LOOP COUPLING DUST CAP BY ROTATING DUST CAP CCW APPROX. 1 INCH THEN PULL AWAY FROM PURGE LOOP COUPLING.

C) INSPECT PURGE LOOP COUPLING FOR FOREIGN MATERIAL AND RINSE FACE OF COUPLING.

D) INSPECT GROUND-HALF COUPLING FOR FOREIGN MATERIAL AND RINSE FACE OF COUPLING.

E) POSITION GROUND-HALF COUPLING AND ALIGN INDEX WITH PURGE LOOP COUPLING.

F) MATE GROUND-HALF COUPLING AND ROTATE GROUND-HALF FWD SLEEVE CW APPROX. 1/4 INCH UNTIL BALL IS POSITIONED IN DETENT, DEPRESS BALL AND ROTATE SLEEVE SW UNTIL SLOT IS AGAINST STOP.

G) OPEN GROUND-HALF VALVE BY ROTATING FULLY CCW. (200 DEG. TRAVEL).

H) WHEN MATING -0012 DISCONNECTS, GROUND-HALF COUPLING HAS HANDLE DETENT IN LEAK CHECK POSITION, APPROXIMATELY 100 DEG FROM EITHER CLOSED OR OPEN POSITION. DETENT MUST BE DEPRESSED TO MOVE FROM OPEN TO CLOSED POSITION.

B. SCAPE PERSONNEL WHEN REPORTING ON STATION WILL ESTABLISH COMMUNICATIONS. GIVE STATION CALL SIGN AND NAME. SCAPE PERSONNEL ON STATION BEING RELIEVED SHALL NOT LEAVE STATION UNTIL RELIEF HAS ESTABLISHED COMMUNICATIONS WITH TEST ENGINEER.

6.1.8 INSTRUMENTATION

A. AN LOS MAY OCCUR IF PANEL 4 TELCOM GRP 1 AND GRP 2 SWITCHES ARE SWITCHED SIMULTANEOUSLY.

B. MREC MAY REWIND TAPE RECORDER TO SUPPORT TESTING.

C. MREC MAY START, STOP OR CHANGE SPEED OF QLDS RECORDERS TO SUPPORT TESTING.

6.1.9 COMM

A. CURFCOE WILL RECORD VHF AND S-BAND PARAMETERS WHENEVER S/C RF IS ACTIVATED.

B. THE AUDIO CENTER MAY BE SWITCHED BETWEEN S-BAND, VHF AND PAD COM.

C. CREW MAY POSITION MODE SWITCH ON PANELS 9, 6 BUS MUST BE PER PROCEDURE FOR LIFTOFF.

6.1.10 SCS

A. TERMS USED IN THE LIMITS COLUMN

AMB (AMBIENT)	LOCAL ENVIRONMENTAL VALUE OF PARAMETER
POS (POSITIVE)	MEASURED VALUE IS TO BE GREATER THAN ZERO
NEG (NEGATIVE)	MEASURED VALUE IS TO BE LESS THAN ZERO
INC (INCREASE)	MEASURED VALUE MUST SHOW AN INCREASE FROM PREVIOUS VALUE
DEC (DECREASE)	MEASURED VALUE MUST SHOW A DECREASE FROM PREVIOUS VALUE
MIN (MINIMUM)	MEASURED VALUE MUST BE EQUAL TO OR GREATER THAN VALUE INDICATED
MAX (MAXIMUM)	MEASURED VALUE MUST BE EQUAL TO OR LESS THAN VALUE INDICATED
*** OR XXX	INDICATES REFERENCE ONLY OR NO REQUIREMENT UNLESS SPECIFIED
LL (LOWER LIMIT)	MEASUREMENT OUT OF RANGE

	OF SIGNAL CONDITIONER
UUU (UPER LIMIT)	MEASUREMENT OUT OF RANGE OF SIGNAL CONDITIONER (VALID READING CANNOT BE DISPLAYED)
NMT	NO MORE THAN
NLT	NOT LESS THAN
F/S	FULL SCALE

B. VALUES RECORDED IN LIMITS COLUMN ADJACENT TO THE MEAS. STIM. NUMBERS ARE THE TOLERANCES SPECIFIED FOR THE PARTICULAR MEASUREMENT. THREE BASIC TOLERANCE FORMATS ARE USED. AN EXAMPLE OF EACH FOLLOWS..

EXAMPLE +4.5
+3.9

MEANING THE RECORDED VALUE MUST BE EQUAL TO OR BETWEEN THE INDICATED VALUES.

EXAMPLE +4.2 +/- 0.3

MEANING THE RECORDED VALUE MUST EQUAL TO OR BETWEEN +3.9 AND +4.5.

MIN/MAX

EXAMPLE -9.0 MIN

MEANING THE RECORDED MEASUREMENT MUST BE EQUAL TO OR MORE NEGATIVE THAN -9.0 EG' -9.0. -10.0. -11.0 THRU FULL SCALE

EXAMPLE +9.0 MIN

MEANING THE RECORDED MEASUREMENT MUST BE EQUAL TO OR MORE POSITIVE THAN +9.0, +10.0, +11.0 THRU FULL SCALE

C. FDAI ATTITUDE ERROR AND RATE INDICATION POLARITIES ARE AS FOLLOWS..

POSITIVE INDICATION..

PITCH = DOWN

YAW = LEFT

ROLL = LEFT

FDAI TOTAL ATTITUDE INDICATION POLARITIES ARE AS FOLLOWS..

POSITIVE INDICATION..

PITCH = BALL ROTATES DOWN

YAW = BALL ROTATES LEFT

ROLL = BUG ROTATES CCW

EMS RAI POLARITY

POSITIVE INCREASING ANGLE (0 TO 360 DEG)

RAI ROTATES CCW

D. DRIFTING OF FDAI IS NORMAL WHEN G/N IS IN STANDBY AND FDAI SELECT SWITCH IS CONFIGURED TO SELECT G/N.

E. CARE MUST BE TAKEN TO EXERCISE RHC IN SINGLE AXIS ONLY WHEN CALLED FOR BY PROCEDURE. IF WHEN SINGLE AXIS COMMAND IS REQUESTED AND MULTIE AXIS OUTPUT IS NOTED SCDR/SCMP MAY BE DIRECTED TO POSITION RHC SUCH THAT SINGLE AXIS COMMAND IS ACHIEVED.

F. THE FOLLOWING FUNCTIONS MAY BE PERFORMED AT DIRECTION OF MSCS, WITH CONCURRENCE OF MTPE/MSTC

1. DURING HOLD, TVC SERVO POWER MAY BE SET TO OFF AND THEN ON, SCS ELEC PWR SEL MAY BE TURNED TO ECA AND THE BMAGS TO WARMUP.

2. PITCH AND YAW GIMBAL POSITION THUMB WHEELS CAN BE ADJUSTED TO MAINTAIN SPS PITCH AND YAW GIMBAL MOTOR CLUTH CURRENTS AT OR BELOW 120 MILLIAMPS WHEN TVC IS ENABLED AND THE GIMBAL MOTORS ARE OFF

3. THE BMAG'S MAY BE CAGED DURING OPEN LOOP TESTS.

4. THE GDC MAY BE ALIGNED TO AVOID GIMBAL

LOCK

5. HAND CONTROL PROTECTIVE COVERS MAY BE REMOVED OR INSTALLED

6. TRANSPARENT PROTECTIVE COVERS MAY BE REMOVED/INSTALLED OVER FDAI 1, FDAI 2, FP-GPI AND ATT/SET INDICATORS.

G. TO PREVENT EXCESSIVE GIMBAL MOTOR HEATING A 52 MINUTE COOLDOWN PERIOD IS REQUIRED FOLLOWING 8 MINUTES OF GIMBAL MOTOR OPERATION WITHOUT FORCING FUNCTION APPLIED (GIMBAL STATIONARY OR DURING SLOW RAMPS). IF LESS THAN 8 MINUTES ARE USED THE COOLDOWN TIME IS REDUCED PROPORTIONALLY.

6.1.1$_1$ G AND N

A. G AND N SYSTEM MAY BE TURNED OFF TO CONSERVE RUN TIME WITH MTPE CONCURRENCE.

B. IN THE EVENT THAT S/C MAIN BUS A AND B POWER IS LOST, ALL G AND N CIRCUIT BREAKERS ON PANEL 5 MUST BE OPENED BEFORE REAPPLICATION OF BUS POWER.

C. OPTICS EYEPIECES AND COVERS MAY BE INSTALLED OR REMOVED AT THE DIRECTION OF MGNS.

D. WHEN THE OPTICS ARE ON AND NOT IN USE, THE OPTICS ZERO SW SHOULD BE SET TO ZERO, AND OPTICS MODE SW. TO MAN. OPTICS CONTROL SPEED SW. OPTICS MODE SW. AND OPTICS ZERO MAY BE CHANGED WHEN USING THE OPTICS. THE OPTICS SPEED SW SHOULD BE SET TO LO WHEN SIGHTINGS ARE MADE.

E. RETICLE BRIGHTNESS THUMBWHEEL (PANEL 122) MAY BE ADJUSTED DURING OPTICS TESTS. RETURN TO MINIMUM POSITION AT COMPLETION OF TEST.

F. USE OF VERBS 01 THROUGH 17 FOR DISPLAY OR MONITOR MAY BE ACCOMPLISHED AT MGNS DISCRETION. ROUTINES MAY BE TERMINED AT MGNS DIRECTION WITH A V34E OR KEY RELEASE.

G. C156 FUNCTIONS MAY BE EXECUTED AT MGNS DIRECTION.

H. IN THE EVENT AN ACE ERROR IS GENERATED (P5), IT MAY BE RESET BY R145, ERROR RESET ON KZ0024. IF IT DOES NOT RECUR WITHIN 5 SEC AFTER BEING RESET, SYSTEM OPERATION SHALL BE CONSIDERED NORMAL.

I. WHEN R1, R2, AND/OR R3 ARE GIVEN AS XXXXX WITH A DECIMAL POINT AT ANY LOCATION, IT IS AN IMPLIED DECIMAL POINT ONLY. IT WILL NOT BE DISPLAYED. IT IS INCLUDED AS A TESTING AID ONLY.

J. A RESTART ALARM MAY OCCUR WHEN OPTICS POWER IS APPLIED ON REMOVED. IF A RESTART OCCURS, DISREGARD AND CLEAR THE ALARM BY DEPRESSING RESET ON THE K-START OR CMC DSKYS.

K. TO CONSERVE DSKY OPERATING TIME WHEN DSKY DISPLAYS ARE NOT REQUIRED, MGNS, AT HIS OPTION, MAY BLANK DSKY DISPLAYS BY DIRECTING THAT V36E, RESET BE INSERTED IN THE CMC.

L. A V36E, WHEN IMU OPERATE POWER IS APPLIED, WILL MODE THE IMU TO INERTIAL. IF THIS MODE IS UNDESIRABLE, MGNS, AT HIS OPTION, MAY DIRECT THE IMU BY PLACED IN THE COARSE ALIGN MODE BY V41N20E, FOLLOWED BY ENTERING THE DESIRED GIMBAL ANGLES.

M. COMMANDING THE IMU TO COARSE ALIGN WILL ILLUMINATE THE NO ATT DISPLAYS IN THE C/M.

N. TEMP, GIMBAL LOCK, PROG, RESTART AND TRACKER DSKY ALARMS WILL CAUSE THE PGNS ALARM ON PANELS 2 AND 122. EXCEPT WHERE SPECIFIED IN THIS PROCEDURE, VERIFICATION OF THE PGNS DISPLAY IS NOT NECESSARY.

O. WHEN CMC ENTRIES ARE MADE VIA K-148, THE DSKY UPLINK ACTIVITY WILL ILLUMINATE. EXCEPT WHERE, SPECIFIED IN THIS PROCEDURE, VERIFICATION OF THE UPLINK ACTIVITY DISPLAY IS NOT NECESSARY.

P. RECORDER SWITCH POSITION MAY BE CHANGED AT MGNS OPTION.

Q. BEFORE ZEROING OPTICS, VERIFY OPTICS TRUN. IS LESS THAN 5 DEG. (CRT P3-14), IF NOT PLACE OPTICS MODE SWITCH TO MANUAL AND USE OHC TO POSITION TRUN. TO APPROX. +5 DEG. OR LESS.

R. G AND N PROGRAM ALARM MAY OCCUR DURING UDL RTC OR MANUAL PCM FORMAT SWITCHING. MGNS WILL RECORD FAIL REG AND HAVE THE ALARM RESET.

S. IMU HEATER POWER SHALL NOT BE REMOVED FOR MORE THAN 15 MINUTES IN ORDER TO PREVENT POSSIBLE DAMAGE TO THE IMU.

T. MGNS MAY LOAD/OR INITIATE INLINK MONITORS AS FOLLOWS..

DELETED

TO LOAD LOOK TASK *1

V21N01 E
1721 E
10045 E
N15 E
1724 E/E
1733 E/E
5267 E/E
2 E/E
10045 E/E
1731 E/E
1733 E/E
5650 E/E
45 E/E
30045 E/E
55750 E/E
25747 E/E
5267 E/E
144 E/E
1721 E/E

TO INITIATE LOOK TASK

V25N26 E
1 E
1721 E
3 E
V31 E

DELETED *1

U. MGNS MAY ALIGN THE IMU TO MINIMIZE MIDDLE GIMBAL DRIFT.

V41 N20
E
+00000
E
+00000
E
+02861
E

WAIT 15 SECONDS
V40 N20
E

V. MGNS MAY ALIGN CMC CLOCK PER CLOCK ALIGN PROCEDURE (V2) OR AS FOLLOWS..

V25 N36
E
+00XXX X= HRS.
E
+00YY Y = MIN.
E
+0ZZ.ZZ Z = SEC.
E

THE G AND N GSE UPLINK LINE RELAYS MAY BE RESET (RTC 10 AND 14) OR SET (RTC 11 AND 15) TO SUPPORT S/C TESTING.

W. IN THE EVENT OF ADVERSE WEATHER CONDITIONS AND THE G AND N SYSTEM IS NOT ACTIVATED, MSTC WILL ADVISE MGNS TO RECONFIGURE PTC, ACTIVATE SYSTEM TO STANDBY AND SUBSEQUENTLY DEACTIVATE PER VOL. 2 DEACTIVATION SEQUENCES.

6.1.2 AIRFRAME.. IN THE EVENT OF INCLEMENT WEATHER OR AT DIRECTION FROM THE TPE CLOSE SIDE HATCH AS FOLLOWS.

A. VERIFY CREW COMPARTMENT IS SECURE AND CLOSE CM HATCH.

B. REMOVE 9EH2191 SEAL PROTECTOR FROM CM.

C. VERIFY SEAL IS FREE FROM FOREIGN PARTICLES.

D. VERIFY HANDLE PAWL CONTROL AND HOLDING PAWL CONTROL ARE SET TO POSITION 'N' (NEUTRAL).

E. VERIFY/INSTALL V36-553292 SAFETY PIN IN HANDLE PAWL CONTROL.

F. VERIFY BPC HATCH RELEASE SELECTOR ARROW IS POINTING AWAY FROM ''BPC JETT''.

G. RELEASE COUNTERBALANCE LOCK BY HAND AND VERIFY 'D' RING IN STOWED POSITION.

H. CAREFULLY CLOSE HATCH AND HOLD IN CLOSED POSITION.

NOTE

APPLY PUSH FORCE GRADUALLY AT
HATCH HANDLE UNTIL THE
MECHANISM STARTS TO LATCH.

I. INSERT TOOL V36-601400-11 INTO HATCH LATCHING MECHANISM AND TURN TOOL CLOCKWISE TO STOP. RELAX TORQUE AND RELEASE 'B' TOOL.

NOTE

MECHANISM MAY MOVE CCW SLIGHTLY DUE TO SPRING PRESSURE.

6.2 SPECIAL INSTRUCTIONS

6.2.1 LEAK CHECK (BUBBLE TYPE) REFERRED TO IN THIS PROCEDURE SHALL CONSIST OF THE FOLLOWING..

A. APPLY LEAK DETECTOR SOLUTION TO ALL DESIGNATED CONNECTIONS.

B. NO LEAKS PERMITTED.

C. IF LEAK IS DETECTED, VENT PRESSURE IN AFFECTED AREA PRIOR TO ANY CORRECTIVE ACTION. FOLLOWING CORRECTIVE ACTION, REPEAT LEAK CHECK.

D. FOLLOWING FINAL LEAK CHECK, WASH OFF ALL LEAK DETECTOR SOLUTION WITH DISTILLED WATER AND DRY AREA WITH LINT-FREE CLOTH.

6.2.2 IF INGRESS OF SM-3 IS REQUIRED PERFORM THE FOLLOWING..

SFDS C14-075
MV-15 - CLOSE

SSMT - DISCONNECT PURGE SUPPLY QD'S (ME144-0023-0081) FROM TP2 AND TP3. INSTALL FLIGHT DUST CAPS FINGER TIGHT AND BAG GROUND HALF OF QD'S TO MAINTAIN CLEANLINESS.

DISCONNECT PURGE VENT QD (ME144-0023-0061) FROM TP6. INSTALL FLIGHT DUST CAP FINGER TIGHT AND BAG GROUND HALF OF QD MAINTAIN CLEANLINESS.

WHEN EGRESS HAS BEEN ACCOMPLISHED ON SM-3,
PERFORM THE FOLLOWING..

SSMT - CONNECT FLEX HOSE ASSY WITH QD ME144-0023-0061 TO TP6. CONNECT FLEX HOSE ASSY'S WITH QD'S ME144-0023-0081 2 EA. TO TP2 AND TP3.

SFDS C14-075
MV15 - OPEN
VERIFY PG11 INDICATES 5 +/- 1 PSIG.

6.2.3 NOTE

ON CSGS CONSOLE, IF GROUND POWER IS INTERRUPTED, GSE INTERRUPTED LITE OR LM PWR INTERRUPTED LITE WILL ILLUMINATE. NOTIFY T/C AND NOTE TIME OF OCCURRANCE.

TO RESET..

1. VERIFY IBM GND PWR IS RESTORED

2. PRESS ''GSE PWR INTER'' SW
VERIFY CLOSED LITE ON

3. PRESS ''GSE PWR INTER'' SW
VERIFY CLOSED LITE OFF
GSE PWR INTER LITE OFF

4. PRESS LM PWR INTER SW
VERIFY CLOSED LITE ON

5. PRESS LM PWR INTER SW
VERIFY LM PWR INTER LITE OFF
CLOSED LITE OFF

7.0 COMMUNICATION AND STATION ASSIGNMENTS

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CSM TROUBLESHOOTING	268

8.0 TEST SETUP

8.1 TEST SETUP SHEET NO. 1 - GENERAL

NOTE

SEE VOLUME II FOR ADDITIONAL SETUP REQUIREMENTS.

8.1.1 PERFORM SETUPS LISTED FOR PRE-COUNT (CDDT AND LAUNCH)..

8.2 SCDR - TEST SETUP SHEET NO. 2

8.3 SLMP - TEST SETUP SHEET NO. 3

8.4 SCMP - TEST SETUP SHEET NO. 4

8.5 SSET - TEST SETUP SHEET NO. 5

8.1.2 PERFORM SETUPS LISTED FOR MID-COUNT (CDDT AND LAUNCH)..

8.2 SCDR - TEST SETUP SHEET NO. 2

8.3 SLMP - TEST SETUP SHEET NO. 3

8.4 SCMP - TEST SETUP SHEET NO. 4

8.2 PRE-POWER SW. LIST (SCDR) (TEST SETUP SHEET NO. 2)

A. PANEL 601

REPRESS 02 VLV (72.1)	CLOSE	

B. PANEL 15

COAS PWR SW	OFF	015S006
UTIL PWR SW	OFF	015S005
PL		
BCN SW	(CENTER)	015S003
DYE MARKER SW	(OFF-DOWN), GUARDED	015S002
VENT SW	OFF	015S004

C. PANEL 325 (LH GIRTH FRAME)

GLY TO RAD PRIM VLV (2.36A)	PUSH, NORMAL	
CABIN PRESS VLV (LH, 3.1B)	BOOST ENT	
CABIN PRESS VLV (RH, 3.1A)	BOOST ENT	

D. PANEL 326 (LH GIRTH FRAME)

GLY RSVR		
IN VLV (2.28G)	OPEN	
OUT VLV (2.28I)	OPEN	
BYPASS VLV (2.28H)	CLOSED	
02		
REPRESS PKG VLV	FILL	
SM SUPPLY VLV (4.26B)	ON	
SURGE TK VLV (4.26A)	ON	

E. PANEL 376

PLVC SW	NORMAL	376S002

F. PANEL 375

SURGE TK PRESS RELIEF VLV (4.27A)	AUTO (OPEN)	

8.2 (CONT)

G. PANEL 380

SUIT TEST VLV (4.16)	OFF	
(02 DEMAND REG) VLV (4.16C)	BOTH	
(SUIT RET AIR) VLV (1.3)	PUSH	
	CLOSE	

H. PANEL 9

MODE SW	INTERCOM/ PTT	009S001
VOX SENS TW	5	
MASTER VOL TW	5	
PWR SW	OFF	009S006
INTERCOM SW	OFF	009S005
INTERCOM VOL TW	5	
PAD COMM VOL TW	5	
PAD COMM SW	OFF	009S003
S BAND SW	OFF	009S002
S BAND VOL TW	5	
VHF AM VOL TW	5	
VHF AM SW	OFF	009S004
SUIT PWR SW	OFF	009S007
AUDIO CONT SW	NORMAL	009S008
VHF RNG RESET SW	NORMAL	009S009

8.2 (CONT)

I. PANEL 8

SCS		
TVC AC1 CB	OPEN	008C055
AC1 CB	OPEN	008C009
AC2 CB	OPEN	008C010
AUTO RCS SELECT		
A/C ROLL A1 SW	OFF	008S017
A/C ROLL C1 SW	OFF	008S018
A/C ROLL A2 SW	OFF	008C019
A/C ROLL C2 SW	OFF	008S020
B/D ROLL B1 SW	OFF	008S021
B/D ROLL D1 SW	OFF	008S022
B/D ROLL B2 SW	OFF	008S023
B/D ROLL D2 SW	OFF	008S024
PITCH A3 SW	OFF	008S025
PITCH C3 SW	OFF	008S026
PITCH A4 SW	OFF	008S027
PITCH C4 SW	OFF	008S028
YAW B3 SW	OFF	008S029
YAW D3 SW	OFF	008S030
YAW B4 SW	OFF	008S031
YAW D4 SW	OFF	008S032
SCS		
ECA/TVC AC2 CB	OPEN	008C054
DIRECT ULL		
MNA CB (A34-377-5 INSTALLED)	OPEN	008C072
MNB CB (A34-377-5 INSTALLED)	OPEN	008C073
CONTR/DIRECT		
1 MNA CB	OPEN	008C013
1 MNB CB	OPEN	008C014
2 MNA CB	OPEN	008C070
2 MNB CB	OPEN	008C071
A/C ROLL		
MNA CB	OPEN	008C015
MNB CB	OPEN	008C016
B/D ROLL		
MNA CB	OPEN	008C017
MNB CB	OPEN	008C018
PITCH		
MNA CB	OPEN	008C019
MNB CB	OPEN	008C020

8.2 (PANEL 8 CONT)	YAW		
	MNA CB	OPEN	008C021
	MNB CB	OPEN	008C022
	ORDEAL		
	AC2 CB	OPEN	008C065
	MNB CB	OPEN	008C064
	SCS		
	CONTR/AUTO		
	MNA CB	OPEN	008C074
	MNB CB	OPEN	008C075
	LOGIC BUS		
	1/2 MNA CB	OPEN	008C063
	3/4 MNA CB	OPEN	008C023
	1/4 MNB CB	OPEN	008C062
	2/3 MNB CB	OPEN	008C024
	SYS		
	MNA CB	OPEN	008C011
	MNB CB	OPEN	008C012
	FLOOD		
	DIM SW	1	008S012
	FIXED SW	OFF	008S013
	INTERIOR LT		
	NUMERICS CONT	OFF	
	FLOOD CONT	OFF	
	INTGL CONT	OFF	
	RCS		
	CM HTRS		
	1 MNA CB	OPEN	008C067
	2 MNB CB	OPEN	008C066
	SM HTRS		
	A MNB CB	OPEN	008C037
	C MNB CB	OPEN	008C038
	B MNA CB	OPEN	008C039
	D MNA CB	OPEN	008C040
	PRPLNT ISOL		
	MNA CB (A34-377-5 INSTALLED)	OPEN	008C041
	MNB CB (A34-377-5 INSTALLED)	OPEN	008C042
	LOGIC		
	MNA CB	OPEN	008C043
	MNB CB	OPEN	008C044
	EMS		
	MNA CB	OPEN	008C052
	MNB CB	OPEN	008C053

8.2 (PANEL 8, CONT)	DOCK PROBE		
	MNA CB	OPEN	008C076
	MNB CB	OPEN	008C077
	FLOAT BAG		
	1 SW	VENT	008S004
	2 SW	VENT	008S005
	3 SW	VENT	008S006
	SECS		
	LOGIC		
	1 SW	OFF	008S011
	2 SW	OFF	008S015
	PYRO ARM		
	A SW	SAFE	008S010
	B SW	SAFE	008S014
	SPS		
	GAUGING		
	MNA CB	OPEN	008C025
	MNB CB	OPEN	008C026
	SPS GAUGING		
	AC1 CB	OPEN	008C027
	AC2 CB	OPEN	008C028
	HE VLV		
	MNA CB (A34-377-3 INSTALLED)	OPEN	008C029
	MNB CB (A34-377-3 INSTALLED)	OPEN	008C030
	PITCH		
	1 BAT A CB	OPEN	008C031
	2 BAT B CB	OPEN	008C032
	YAW		
	1 BAT A CB	OPEN	008C033
	2 BAT B CB	OPEN	008C034
	PILOT VLV		
	MNA CB (A34-377-3 INSTALLED)	OPEN	008C068
	MNB CB (A34-377-3 INSTALLED)	OPEN	008C069
	FLOAT BAG		
	1 BAT A CB	OPEN	008C006
	2 BAT B CB	OPEN	008C007
	3 FLT/PL CB	OPEN	008C008

8.2 (PANEL 8, CONT)	SECS			
		LOGIC		
		A BAT A CB	OPEN	008C003
		B BAT B CB	OPEN	008C004
		ARM		
		A BAT A CB	OPEN	008C001
		B BAT B CB	OPEN	008C002
	EDS			
		1 BAT A CB	OPEN	008C049
		2 BAT C CB	OPEN	008C050
		3 BAT B CB	OPEN	008C051
	ELS			
		BAT A CB	OPEN	008C045
		BAT B CB	OPEN	008C046
	PL VENT FLT/PL CB		OPEN	008C005
J.	PANEL 7			
	EDS PWR SW		OFF	007S001
	SCS TVC SERVO PWR			
		1 SW	OFF	007S008
		2 SW	OFF	007S009
	FDAI/GPI PWR SEL		OFF	007S003
	SCS LOGIC PWR 2/3 SW		OFF	007S010
	SCS ELEC PWR SEL		OFF	007S005
	SCS SIG COND/DR BIAS PWR			
		1 SW	OFF	007S011
		2 SW	OFF	007S012
	BMAG			
		1 PWR SEL	OFF	007S006
		2 PWR SEL	OFF	007S007
	DIRECT O2 VLV (4.17)		(CLOSED-CW)	

8.2 (CONT) K. PANEL 1

ALTIMETER	3300 FT	
(EMS) FUNCTION SEL	OFF	
(EMS) GTA SW	(DOWN) (COVER CLOSED)	
(EMS GTA NULL ADJUSTMENT)	AS IS	
(EMS) MODE SW	STBY	
(EMS) DV/EMS SET SW	AS IS	
CMC ATT SW	IMU	001S002
ACCELEROMETER	1G	
FDAI		
SCALE SW	ERR 5/ RATE 5	001S003
SELECT SW	1	001S004
SOURCE SW	GDC	001S005
ATT SET SW	GDC	001S006
MAN ATT		
ROLL SW	RATE CMD	001S007
PITCH SW	RATE CMD	001S008
YAW SW	RATE CMD	001S009
LIMIT CYCLE SW	OFF	001S010
ATT DEADBAND SW	MIN	001S011
RATE SW	LOW	001S012
TRANS CONTR PWR SW	OFF	001S066
ROT CONTR PWR		
NORM 1 SW	OFF	001S064
NORM 2 SW	OFF	001S065
DIRECT 1 SW	OFF	001S013
DIRECT 2 SW	OFF	001S067
SC CONT SW	SCS	001S018
CMC MODE SW	FREE	001S019

8.2 (CONT, PANEL 1)	NO AUTO ABORT PB	GUARDED	001S029
	APEX COVER JETT PB	GUARDED	001S030
	LES MOT FIRE PB	GUARDED	001S031
	DROGUE DEPLOY PB	GUARDED	001S032
	CANARD DEPLOY PB	GUARDED	001S033
	MAIN DEPLOY PB	GUARDED	001S034
	CSM/LV SEP PB	GUARDED	001S035
	CM RCS HE DUMP PB	GUARDED	001S060
	BMAG MODE		
	ROLL SW	RATE 2	001S020
	PITCH SW	RATE 2	001S021
	YAW SW	RATE 2	001S022
	SPS THRUST SW	NORMAL	001S023
	DIRECT ULLAGE PB	AS IS	001S024
	THRUST ON PB	AS IS	001S025
	DV THRUST		
	A SW	OFF (GUARDED)	001S026
	B SW	OFF (GUARDED)	001S059
	SPS GMBL		
	PITCH TW	0	
	YAW TW	0	
	ATT SET		
	ROLL TW	000	
	PITCH TW	000	
	YAW TW	000	
	GDC ALIGN PB	AS IS	001S037
	SCS TVC		
	PITCH SW	RATE CMD	001S038
	YAW SW	RATE CMD	001S039
	SPS GMBL MOT		
	PITCH		
	1 SW	OFF	001S040
	2 SW	OFF	001S041
	YAW		
	1 SW	OFF	001S042
	2 SW	OFF	001S043

8.2 (CONT, PANEL 1)	DV CG SW	CSM	001S054
	ELS LOGIC SW	OFF, GUARDED	001S044
	ELS AUTO SW	MAN	001S063
	CM RCS LOGIC SW	OFF	001S046
	CM PRPLNT		
	DUMP SW	OFF, GUARDED	001S047
	PURGE SW	(OFF) GUARDED	001S048
	IMU CAGE SW	(OFF-DOWN) GUARDED	001S049
	ENTRY		
	EMS ROLL SW	OFF	001S050
	.05G SW	OFF	001S051
	LV/SPS IND		
	ALPHA SW	ALPHA	001S052
	S-II/S-IVB SW	GPI	001S053
	TVC GMBL DR		
	PITCH SW	AUTO	001S027
	YAW SW	AUTO	001S028
	EVENT TIMER		
	RESET SW	(UP-CENTER)	001S055
	START SW	(CENTER)	001S056
	MIN SW	(CENTER)	001S057
	SEC SW	(CENTER)	001S058

8.2 (CONT) L. PANEL NO. 2 (L.S)

EDS AUTO SW	OFF	002S067
CSM/LM FINAL SEP		
1 SW	(DOWN), GUARDED	002S109
2 SW	(DOWN) GUARDED	002S112
CM/SM SEP		
1 SW	(OFF-DOWN) GUARDED	002S110
2 SW	(OFF-DOWN) GUARDED	002S111
SIVB/LM SEP SW	(OFF-DOWN) GUARDED	002S108
ABORT SYS		
PRPLNT SW	DUMP AUTO	002S063
2 ENG OUT SW	AUTO	002S064
LV RATES SW	AUTO	002S065
TWR JETT 1 SW	AUTO GUARDED	002S066
TWR JETT 2 SW	AUTO GUARDED	002S096
LV GUID SW	IU (GUARDED)	002S069
LV SII/SIVB SW	OFF, GUARDED	002S068
LV XLUNAR	INJECT	002S070
MAIN RELEASE SW	(OFF-DOWN) GUARDED	002S071
DOCK PROBE		
EXTD/REL SW	OFF (GUARDED)	002S001
RETR PRIM SW	OFF	002S002
RETR SEC SW	OFF	002S003
EXTERIOR LT RUN/EVA SW	OFF	002S005
EXTERIOR LT RNDZ SW	OFF (CENTER)	002S114
TUNNEL LT SW	OFF	002S006
LM PWR SW	OFF	002S082

8.2 (CONT, PANEL 2)	S/M RCS HE 1		
	A SW	CENTER	002S024
	B SW	CENTER	002S025
	C SW	CENTER	002S026
	D SW	CENTER	002S027
	UP TLM		
	CM SW	ACCEPT	002S021
	IU SW	BLOCK	002S115
	CM RCS PRESS SW	(OFF-DOWN), GUARDED	002S031
	SM RCS IND SW	HE TK TEMP	002S098
	SM RCS HE 2		
	A SW	(CENTER)	002S034
	B SW	(CENTER)	002S035
	C SW	(CENTER)	002S036
	D SW	(CENTER)	002S037
	SM RCS HTRS		
	A SW	OFF	002S092
	B SW	OFF	002S094
	C SW	OFF	002S093
	D SW	OFF	002S095
	SM RCS PRPLNT		
	A SW	(CENTER)	002S047
	B SW	(CENTER)	002S048
	C SW	(CENTER)	002S049
	D SW	(CENTER)	002S050

8.2 (CONT, PANEL 2)	RCS		
	CMD SW	(CENTER)	002S043
	TRNFR SW	(CENTER)	002S044
	CM RCS PRPLNT		
	1 SW	(CENTER)	002S045
	2 SW	(CENTER)	002S046
	SM RCS SEC PRPLNT FUEL PRESS		
	A SW	(CENTER)	002S116
	B SW	(CENTER)	002S117
	C SW	(CENTER)	002S118
	D SW	(CENTER)	002S119

M. PANEL 13 (ORDEAL, STOWED, COMPARTMENT U3)

FDAI 1 SW	INRTL	013S004
FDAI 2 SW	INRTL	013S005
EARTH/LUNAR SW	PWR OFF	013S001
LTG SW	OFF	013S006
SLEW SW	(CENTER)	013S003
MODE SW	HOLD/FAST	013S002
ALT SET CONT	AS IS	

N. COUCH ARM

RHC 2	LOCKED	
THC	NEUTRAL AND LOCKED	

8.3 PRE-POWER SW LIST (SLMP) (TEST SETUP SHEET NO. 3)

A. PANEL 16

DOCK TRGT SW	OFF	016S001
COAS PWR SW	OFF	016S002
UTIL PWR SW	OFF	016S003

B. PANEL 600

EMER 02 VLV (72.2)	CLOSE	

PANEL 602

REPRESS 02 RELF VLV (4.27B) PRESS IND PSIG	OPEN (AUTO)	

C. PANEL 227

SC1 INST PWR SW	OFF	227S001

D. PANEL 278 (RHEB)

UPRIGHTING SYS COMPR 1 CB	OPEN	278C001
UPRIGHTING SYS COMPR 2 CB	OPEN	278C002
SIVB/LM SEP PYRO A CB	OPEN	278C003
SIVB/LM SEP PYRO B CB	OPEN	278C004

F. PANEL 276 (RHEB)

INST PWR CONT OPERATIONAL		
CB1	CLOSE	276C001
CB2	CLOSE	276C002
CB3	CLOSE	276C003
CB4	CLOSE	276C004

8.3 (CONT)

G. MAIN CIRCUIT BREAKER PNL 275

MN A		
BAT BUS A CB	CLOSE	275C009
BAT C CB	OPEN	275C011
MN B		
BAT C CB	OPEN	275C012
BAT BUS B CB	CLOSE	275C010
FLT/PL		
BAT BUS A CB	OPEN	275C007
BAT BUS B CB	OPEN	275C008
BAT C CB	OPEN	275C013
MNA CB	CLOSE	275C005
MNB CB	CLOSE	275C006
INV PWR		
1 MNA CB	CLOSE	275C001
2 MNB CB	CLOSE	275C002
3 MNA CB	CLOSE	275C003
3 MNB CB	CLOSE	275C004

H. PANEL 6

MODE SW	INTERCOM/ PTT	006S001
VOX SENS TW	5	
MASTER VOL TW	5	
PWR SW	OFF	006S006
INTERCOM VOL TW	5	
INTERCOM SW	OFF	006S005
PAD COMM VOL TW	5	
PAD COMM SW	OFF	
S-BAND SW	OFF	006S002
S-BAND VOL TW	5	
VHF AM VOL TW	5	
VHF AM SW	OFF	006S004
AUDIO CONT SW	NORM	006S008
SUIT PWR SW	OFF	006S007

8.3 (CONT) I. PANEL 5

FC PUMPS		
1 SW	OFF	005S001
2 SW	OFF	005S002
3 SW	OFF	005S003
G/N PWR SW	OFF	005S012
MN BUS TIE		
BAT A/C SW	OFF	005S004
BAT B/C SW	OFF	005S005
BAT CHGR SW	AC1	005S006
NON ESS BUS SW	MN B	005S009
EPS SNSR SIG		
MNA CB	CLOSE	005C001
MNB CB	CLOSE	005C002
AC1 CB	CLOSE	005C003
AC2 CB	CLOSE	005C004
C/W		
MNA CB	OPEN	005C052
MNB CB	OPEN	005C053
LM PWR 1 MNB CB	OPEN	005C074
INV CONT		
1 CB	CLOSE	005C005
2 CB	CLOSE	005C006
3 CB	CLOSE	005C007
EPS SNSR UNIT		
DC BUS A CB	CLOSE	005C008
DC BUS B CB	CLOSE	005C009
AC BUS 1 CB	CLOSE	005C010
AC BUS 2 CB	CLOSE	005C011
BAT RELY BUS		
BAT A CB	CLOSE	005C012
BAT B CB	CLOSE	005C013
LM PWR 2 MNB CB	OPEN	005C066
INTERIOR LT		
INTGL CONT	OFF	
FLOOD		
CONT	OFF	
DIM SW	1	005S010
FIXED SW	OFF	005S011

8.3 (CONT, PANEL 5)

ECS RAD			
CONT			
AC1 CB		CLOSE	005C068
AC2 CB		CLOSE	005C069
CONT/HTRS			
MNA CB		CLOSE	005C067
MNB CB		CLOSE	005C070
HTRS OVLD			
BAT A CB		*CLOSE	005C072
BAT B CB		*CLOSE	005C073

*NOTE

FOR LAUNCH MIDCOUNT, PERFORM THE FOLLOWING..

HTRS OVLD		
HTRS		
BAT A CB	OPEN	005C072
BAT B CB	OPEN	005C073

BAT CHGR		
BAT A CHG CB	CLOSE	005C014
BAT B CHG CB	CLOSE	005C015
MNA CB	CLOSE	005C016
MNB CB	CLOSE	005C017
AC PWR CB	CLOSE	005C018
INST		
ESS MNA CB	OPEN	005C019
ESS MNB CB	OPEN	005C020
NON ESS CB	OPEN	005C022
SCI EQUIP		
SEB 1 CB	OPEN	005C023
SEB 2 CB	OPEN	005C024
HATCH CB	OPEN	005C025
ECS		
POT H2O HTR		
MNA CB	CLOSE	005C026
MNB CB	CLOSE	005C027
H2O ACCUM		
MNA CB	CLOSE	005C028
MNB CB	CLOSE	005C029
XDUCER		
WASTE/POT H2O		
MNA CB	CLOSE	005C030
MNB CB	CLOSE	005C031

PRESS GRP 1		
MNA CB	CLOSE	005C032
MNB CB	CLOSE	005C033
PRESS GRP 2		
MNA CB	CLOSE	005C034
MNB CB	CLOSE	005C035
TEMP		
MNA CB	CLOSE	005C036
MNB CB	CLOSE	005C037
SEC COOL		
AC1 CB	CLOSE	005C044
AC2 CB	CLOSE	005C045
RAD HTR		
MNA CB	CLOSE	005C071
XDUCERS		
MNA CB	CLOSE	005C046
MNB CB	CLOSE	005C047
WASTE H2O/UR DUMP HTR		
MNA CB	OPEN	005C050
MNB CB	OPEN	005C051
CABIN FAN 1 AC1		
PH A CB	CLOSE	005C038
PH B CB	CLOSE	005C039
PH C CB	CLOSE	005C040
CABIN FAN 2 AC2		
PH A CB	CLOSE	005C041
PH B CB	CLOSE	005C042
PH C CB	CLOSE	005C043
G/N		
PWR		
AC1 CB	OPEN	005C054
AC2 CB	OPEN	005C055
IMU		
MNA CB	OPEN	005C056
MNB CB	OPEN	005C057
IMU HTR		
MNA CB	OPEN	005C058
MNB CB	OPEN	005C059
COMPUTER		
MNA CB	OPEN	005C060
MNB CB	OPEN	005C061
OPTICS		
MNA CB	OPEN	005C062
MNB CB	OPEN	005C063

J. PANEL 4

SPS GAUGING SW	OFF	004S003

TELCOM		
GRP 1 SW	OFF	004S004
GRP 2 SW	OFF	004S005
ECS GLY PUMPS SEL	OFF	004S002
SUIT COMPR		
1 SW	OFF	004S006
2 SW	OFF	004S007
SUIT COMPR		
AC1 PH A CB	CLOSE	004C001
PH B CB	CLOSE	004C002
PH C CB	CLOSE	004C003
AC2 PH A CB	CLOSE	004C004
PH B CB	CLOSE	004C005
PH C CB	CLOSE	004C006
ECS GLY PUMP		
AC1 PH A CB	CLOSE	004C007
PH B CB	CLOSE	004C008
PH C CB	CLOSE	004C009
AC2 PH A CB	CLOSE	004C010
PH B CB	CLOSE	004C011
PH C CB	CLOSE	004C012

8.3 (CONT) K. PANEL NO. 3

VHF ANT SEL	SM LEFT	003S001
FC RAD		
1 SW	(CENTER)	003S002
2 SW	(CENTER)	003S003
3 SW	(CENTER)	003S004
FC INDICATOR SEL	1	003S010
FC HTRS		
1 SW	OFF	003S006
2 SW	OFF	003S007
3 SW	OFF	003S008
SPS QTY		
TEST SW	(CENTER)	003S101
OXID FLOW VLV		
INCR SW	NORM	003S104
PRIM SW	PRIM	003S103
PUG MODE SW	NORM	003S102
FC PURGE		
1 SW	OFF (CENTER)	003S011
2 SW	OFF (CENTER)	003S012
3 SW	OFF (CENTER)	003S013
FC MN BUS A		
1 SW	OFF	003S014
2 SW	OFF	003S015
3 SW	OFF	003S016
(MN BUS A) RESET SW	OFF	003S017
SPS HE VLV		
1 SW	OFF	003S018
2 SW	OFF	003S019
SPS		
LINE HTRS SW	(OFF - CENTER)	003S075
PRESS IND SW	HE	003S069
FC REACS		
1 SW	(CENTER)	003S020
2 SW	(CENTER)	003S021
3 SW	(CENTER)	003S022

8.3 (CONT)	FC MN BUS B		
	1 SW	OFF	003S023
	2 SW	OFF	003S024
	3 SW	OFF	003S025
	(MN BUS B) RESET SW	OFF	003S026
	DC IND SEL	MN BUS A	003S027
	BAT CHARGE SEL	OFF	003S028
	S-BAND NORM XPNDR SW	OFF	003S029
	PWR AMPL.		
	PRIM SW	PRIM	003S031
	HI SW	OFF (CENTER)	003S032
	MODE		
	VOICE SW	(OFF - CENTER)	003S033
	PCM SW	(OFF - CENTER)	003S034
	RNG SW	OFF	003S035
	S-BAND AUX		
	TAPE SW	(OFF - CENTER)	003S036
	TV SW	(OFF - CENTER)	003S037
	UP TLM		
	DATA SW	DATA	003S038
	CMD SW	OFF	003S039
	AC INV		
	1 SW	OFF	003S057
	2 SW	OFF	003S058
	3 SW	OFF	003S059

8.3 (CONT, PANEL 3)	S-BAND ANT		
	OMMNI A SW	B	003S041
	OMMNI SW	OMNI	003S040
	VHF AM		
	SQUELCH A TW	AS IS	
	A SW	(OFF - CENTER)	003S043
	B SW	(OFF - CENTER)	003S044
	RCV ONLY SW	OFF (CENTER)	003S071
	VHF BCN SW	OFF	003S045
	VHF RNG SW	OFF	003S078
	AC INV		
	1 AC BUS 1 SW	OFF	003S060
	2 AC BUS 1 SW	OFF	003S061
	3 AC BUS 1 SW	OFF	003S062
	(AC BUS 1) RESET SW	OFF	003S063
	FC REACS VLV SW	NORM	003S076
	H2 PURGE LINE HTR SW	OFF	003S077
	VHF AM SQUELCH B TW	AS IS	
	TAPE RCDR		
	PCM/ANLG SW	PCM/ANLG	003S049
	RCD SW	(OFF - CENTER)	003S050
	FWD SW	(OFF - CENTER)	003S051
	PWR		
	SCE SW	(OFF - CENTER)	003S052
	PMP SW	(OFF - CENTER)	003S054
	TLM INPUTS		
	PCM BIT RATE SW	HIGH	003S055
	AC INV		
	1 AC BUS 2 SW	OFF	003S064
	2 AC BUS 2 SW	OFF	003S065
	3 AC BUS 2 SW	OFF	003S066
	AC BUS 2 RESET SW	OFF	003S067
	AC IND SEL	BUS 1 PH A	003S068

8.3 (CONT) L. PANEL 2 (RS)

PL VENT VLV UNLOCK CONT	(PUSH-LOCK)	
MSN TIMER		
HR SW	(CENTER)	002S101
MIN SW	(CENTER)	002S102
SEC SW	(CENTER)	002S103
C/W		
NORM SW	ACK	002S007
CSM SW	CSM	002S008
PWR SW	(OFF-CENTER)	002S009
LAMP TEST SW	(CENTER)	002S079
MSN TIMER SW	STOP	002S100
RCS IND SEL	CM2	002S028
CABIN FAN		
1 SW	OFF	002S029
2 SW	OFF	002S030
H2 HTRS		
1 SW	(OFF-CENTER)	002S012
2 SW	(OFF-CENTER)	002S013
O2 HTRS		
1 SW	(OFF-CENTER)	002S014
2 SW	(OFF-CENTER)	002S015
O2 PRESS IND SW	SURGE TANK	002S016
H2 FANS		
1 SW	OFF (CENTER)	002S017
2 SW	OFF (CENTER)	002S018

8.3 (CONT, PANEL 2)	O2 FANS		
	1 SW	OFF (CENTER)	002S019
	2 SW	OFF (CENTER)	002S020
	ECS IND SEL	PRIM	002S089
	ECS RAD		
	FLOW CONT		
	AUTO SW	AUTO	002S084
	PWR SW	(CENTER)	002S085
	MAN SEL SW	RAD 1	002S086
	HTR		
	PRIM SW	(OFF - CENTER)	002S087
	SEC SW	OFF	002S088
	POT H2O HTR SW	OFF	002S042
	SUIT CKT H2O ACCUM		
	AUTO SW	(CENTER)	002S051
	ON SW	(CENTER)	002S052
	HEAT EXCH SW	(OFF - CENTER)	002S057
	SEC COOL LOOP		
	EVAP SW	(OFF - CENTER)	002S053
	PUMP SW	(OFF - CENTER)	002S054
	H2O QTY IND SW	WASTE	002S056

8.3	GLY EVAP		
(CONT, PANEL 2)	TEMP IN SW	MAN	002S061
	STEAM PRESS		
	AUTO SW	MAN	002S059
	INCR SW	CENTER	002S060
	H2O FLOW SW	CENTER	002S058
	CABIN TEMP SW	MAN	002S062
	CABIN TEMP AUTO TW	AS IS	
	HI GAIN ANT		
	PWR SW	OFF	002S076
	TRACK SW	AUTO	002S077
	BEAM SW	WIDE	002S090
	PITCH POS CONT	AS IS	
	YAW POS CONT	AS IS	
	SERVO ELEC SW	PRIM	002S083

M. SIDE HATCH AREA

CABIN PRESS DUMP VLV (3.33)	(CLOSE - CW)	

N. COUCH ARM

RHC 1	LOCKED	

8.4 PRE-POWER Sw. LIST (SCMP) (TEST SETUP SHT NO. 4)

A. PANEL 377

GLY TO RAD SEC VLV (2.36B)	NORMAL	

B. PANEL 378

PRIM GLY ACCUM VLV (2.48B)	(OPEN - CCW)	*1

C. PANEL 379

PRIM ACCUM FILL VLV (2.28C)	OFF	

D. COOLANT CONT PANEL 382

SUIT HT EXCH PRIM GLY VLV (1.46)	FLOW	
SUIT FLOW RELIEF VLV (1.16)	OFF	
PRIM GLY EVAP IN TEMP VLV (2.42)	MIN	
SUIT HT EXCH SEC GLY VLV (2.52)	FLOW	
EVAP H_2O CONT		
SEC VLV (5.29B)	OFF	
PRIM VLV (5.29A)	OFF	
H_2O ACCUM		
1 VLV (1.36A)	OFF	
2 VLV (1.36B)	OFF	

8.4 (CONT)

E. PANEL 350

(CO2 CANISTER DIVERT) VLV (1.15)	CENTER

F. OXYGEN CONTROL PANEL 351

MAIN REG A VLV (72.5A)	OPEN
MAIN REG B VLV (72.5B)	OPEN
H2O/GLY TK	
PRESS REG VLV (5.24A)	AS IS
RELIEF VLV (5.24B)	AS IS
EMER CABIN PRESS VLV (4.22C)	OFF
CABIN REPRESS VLV (3.28C)	OFF (CCW)

G. WATER CONTROL PANEL 352

WASTE TK SERVICING VLV (5.18B)	AS IS
PRESS RELIEF VLV (5.23)	AS IS
POT TK IN VLV (5.18A)	AS IS
WASTE TK IN VLV (5.19)	AS IS

H. FORWARD ACCESS HATCH

PRESS EQUALIZATION VLV (3.31)	CLOSE

8.4 (CONT)

I. NAV COMM STA PANEL 10

MODE Sw	INTERCOM/ PTT	010S001
VOX SENS TW	5	
MASTER VOL TW	5	
PWR SW	OFF	010S006
SUIT PWR SW	OFF	010S007
INTERCOM		
VOL TW	5	
SW	OFF	010S005
PAD COMM VOL TW	5	
PAD COMM SW	OFF	
S BAND		
SW	OFF	010S002
VOL TW	5	
AUDIO CONT SW	NORM	010S008
VHF AM		
VOL TW	5	
SW	OFF	010S004

J. PANEL 12 (TUNNEL AREA)

TUNNEL VENT VLV	LM/CM DP	*1

K. PANEL 301 (SUIT NO. 1)

(SUIT FLOW VLV) (1.34A-1)	FULL FLOW	

8.4 (CONT)

L. PANEL 300 (SUIT NO. 3)

(SUIT FLOW VLV) (1.34C-1)	FULL FLOW

M. PANEL 302 (SUIT NO. 2)

(SUIT FLOW VLV) 1.34B-1	FULL FLOW

N. PANEL 303

PRIM CABIN TEMP VLV (2.13C)	C
SEC CABIN TEMP VLV (2.35)	MAX COOL
CABIN HEAT EXCH LOUVERS	CENTERED

O. PANEL 304

DRINKING H20 SUPPLY VLV (5.18D)	OFF

P. PANEL 305

FOOD PREP H20	
COLD VLV (5.22B)	AS IS
HOT VLV (5.22A)	AS IS
DRAIN VLV	CAP INSTALLED

Q. PANEL 306

MSN TIMER SW	STOP	306S005
EVENT TIMER		
RESET SW	(UP -- CENTER)	306S002
START SW	(CENTER)	306S001
MIN SW	(CENTER)	306S003
SEC SW	(CENTER)	306S004
MSN TIMER		
HR SW	(CENTER)	306S006
MIN SW	(CENTER)	306S007
SEC SW	(CENTER)	306S008

8.4 (CONT)

R. PANEL 100 LIGHTING CONTROL

UTIL PWR SW	OFF	100S006
FLOOD		
DIM SW	1	100S005
FIXED SW	OFF	100S004
G/N PWR		
OPTICS SW	OFF	100S001
IMU SW	OFF	100S002
RNDZ XPNDR SW	OFF	100S003
LEB LT		
NUMERICS CONT	OFF	
FLOOD CONT	OFF	
INTGL CONT	OFF	

S. PANEL 101 SYSTEM TEST

SYS TEST SEL		
(LH)	OFF	101S001
(RH)	A	101S002
RNDZ XPNDR SW	OPERATE	101S006
CM RCS HTRS SW	OFF	101S003
WASTE H2O DUMP SW	OFF	101S005
URINE DUMP HTR SW	OFF	101S004

T. PANEL 121

TRUN MAN CONT	AS IS
SHAFT MAN CONT	AS IS

8.4 (CONT)

U. G AND N PANEL LEB 122

OPTICS ZERO SW	ZERO	122S003
OPTICS CONTR		
SPEED SW	LO	122S001
COUPLING SW	DIRECT	122S004
OPTICS MODE SW	MAN	122S002
TELE TRUN SW	SLAVE TO SXT	122S005
CONDITION LAMPS SW	OFF	122S012
UP TLM SW	ACCEPT	122S010
SXT HAND CONTR (OHC)	AS IS	
RETICLE BRIGHTNESS TW	OFF	
(ATT IMP CONT)	NEUTRAL	122S008
MARK PB	AS IS	122S006
MARK REJECT PB	AS IS	122S007

V. PANEL 180

S-BND SQUELCH SW	ENABLE	180S001

W. AUX CIRCUIT BREAKER PNL 225

PCM TLM GRP		
1 CB/AC	CLOSE	225C001
2 CB/AC	CLOSE	225C002
FLT BUS		
MNA CB	CLOSE	225C003
MNB CB	CLOSE	225C004
PMP PWR		
PRIM CB	CLOSE	225C011
AUX CB	CLOSE	225C012

8.4 (CONT)	CREW STA AUDIO		
	L CB	CLOSE	225C007
	CTR CB	CLOSE	225C008
	R CB	CLOSE	225C009
	UDL CB	OPEN	225C010
	HI GAIN ANT		
	FLT BUS CB	OPEN	225C005
	GRP 2 CB	OPEN	225C006
	S BAND FM XMTR DSE		
	FLT BUS CB	CLOSE	225C013
	GRP 1 CB	CLOSE	225C014
	CENTRAL TIMING EQUIP		
	MNA CB	OPEN	225C021
	MNB CB	OPEN	225C022
	RNDZ XPNDR CB	OPEN	225C015
	SIG COND CB	OPEN	225C016
	S BAND PWR AMPL		
	1 FLT BUS CB	CLOSE	225C017
	1 GRP 1 CB	CLOSE	225C018
	2 FLT BUS CB	CLOSE	225C019
	2 GRP 2 CB	CLOSE	225C020
X.	PANEL 229		
	EPS GRP		
	1 MNA CB	CLOSE	229C026
	1 MNB CB	CLOSE	229C027
	2 MNA CB	CLOSE	229C028
	2 MNB CB	CLOSE	229C029
	3 MNA CB	CLOSE	229C030
	3 MNB CB	CLOSE	229C031
	4 MNA CB	CLOSE	229C032
	4 MNB CB	CLOSE	229C033
	5 MNA CB	CLOSE	229C034
	5 MNB CB	CLOSE	229C035

8.4 (CONT, PANEL 229)	MAIN RELEASE		
	PYRO A CB	OPEN	229C048
	PYRO B CB	OPEN	229C049
	UTIL		
	R/L STA CB	OPEN	229C036
	LEB CB	OPEN	229C037
	EPS BAT BUS		
	A CB	CLOSE	229C038
	B CB	CLOSE	229C039
	TIMERS		
	MNA CB	OPEN	229C044
	MNB CB	OPEN	229C045
	SPS LINE HTRS		
	MN A CB	OPEN	229C046
	MN B CB	OPEN	229C047
	O2 VAC 10N PUMPS		
	MN A CB	CLOSE	229C050
	MN B CB	CLOSE	229C051

Y. AUX CIRCUIT BREAKER PNL 226 RHEB

FC 1		
PUMPS AC CB	CLOSE	226C001
REACS CB	(CDDT)-CLOSE (LAUNCH)-OPEN	226C004
BUS CONT CB	CLOSE	226C007
PURGE CB	CLOSE	226C010
RAD CB	CLOSE	226C013
CRYO H2 HTR		
1 CB	CLOSE	226C016
2 CB	CLOSE	226C017
FC 2		
PUMPS AC CB	CLOSE	226C002
REACS CB	(CDDT)-CLOSE (LAUNCH)-OPEN	226C005
BUS CONT CB	CLOSE	226C008
PURGE CB	CLOSE	226C011
RAD CB	CLOSE	226C014
CRYO O2 HTR		
1 CB	CLOSE	226C018
2 CB	CLOSE	226C019

8.4 (CONT, PANEL 226)

FC 3			
PUMPS AC CB	CLOSE	226C003
REACS CB	(CDDT)-CLOSE (LAUNCH)-OPEN	226C006
BUS CONT CB	CLOSE	226C009
PURGE CB	CLOSE	226C012
RAD CB	CLOSE	226C015
CRYO QTY AMPL		
1 CB	OPEN	226C020
2 CB	OPEN	226C021
CRYO FAN MOT		
TK 1 AC1		
PH A CB	CLOSE	226C022
PH B CB	CLOSE	226C023
PH C CB	CLOSE	226C024
TK 2 AC2		
PH A CB	CLOSE	226C025
PH B CB	CLOSE	226C026
PH C CB	CLOSE	226C027
LTG COAS/TUNNEL		
MNA CB	OPEN	226C028
MNB CB	OPEN	226C029
LTG FLOOD		
MNA CB	OPEN	226C030
MNB CB	OPEN	226C031
FLT/PL CB	OPEN	226C038
LTG NUMERIC/INTGL		
LEB CB	OPEN	226C033
L MDC CB	OPEN	226C037
R MDC CB	OPEN	226C034
LTG RUN/EVA/TRGT		
AC2 CB	OPEN	226C039
AC1 CB	OPEN	226C040

8.4 (CONT) Z. BATTERY CIRCUIT BREAKER PNL 250

PYRO A		
BAT A TO PYRO BUS TIE CB	OPEN	250C018
SEQ A CB	OPEN	250C016
PYRO B		
BAT B TO PYRO BUS TIE CB	OPEN	250C019
SEQ B CB	OPEN	250C017
BAT A PWR ENTRY/PL CB	OPEN	250C020
BAT B PWR ENTRY/PL CB	OPEN	250C021
BAT C PWR ENTRY/PL CB	OPEN	250C022
BAT C TO BAT BUS A CB	OPEN	250C015
BAT C TO BAT BUS B CB	OPEN	250C024
BAT C BAT CHRG/EDS 2 CB	OPEN	250C023

AA. WASTE MANAGEMENT PANEL 251

WASTE MGMT OVBD DRAIN VLV (40.3A)	OFF

BB. PANEL 252

BAT VENT VLV (40.3B)	CLOSED
WASTE STOWAGE VENT VLV (40.3C)	VENT

8.5 SSET (SM) SWITCH LIST (TEST SETUP SHEET NO. 5)

NOTE

THE FOLLOWING TO BE PERFORMED FOR CDDT PRECOUNT ONLY.

S14A1
REMOTE SENSE BUS A (CB9) - CLOSED
REMOTE SENSE BUS B (CB10) - CLOSED

LAUNCH COUNTDOWN SC 107

20 JUNE 1969
REV 1

00-82

SHEET 1 OF 6

PRECOUNT

-116 -115 -114 -113 -112 -111 -110 -109 -108 -107 -106 -105 -104 -103 -102 -101 -100 -99 -98 -97 -96 -95 -94 -93 -92 -91 -90 -89 -88 -87 -86 -85 -84 -83 -82 -81 -80 -79 -78

GENERAL ACTIVITY
- LM TURN ON & SYSTEM VERIFICATION
- CSM TURN ON & SYSTEM VERIFICATION
- SET UPS (PLACARDS)
- PRE PWR SW LIST
- STATION CALL
- GSE POWER UP
- SC POWER UP
- FC VACUUM PRESS
- POWER ON STRAY VOLTAGE CHECKS
- COMM TEST
- GHe SERVICE PREPS
- BIO MED CKS
- G&N TEST
- ECS TEST
- G&N/SCS INTERFACE TEST
- INSTR TEST
- SC PWR DOWN
- GSE PWR DOWN (PARTIAL)
- HYPER DISC
- OPEN PAD
- CSM SMALL ORD HOOKUP
- CSM HVY ORD H/U (SIM)
- CSM REMOTE RESISTANCE CKS.
- LM SMALL ORD H/U
- RF SILENCE

PAD ACCESS
- CLEAR SA 7, 8, 9 ML ZERO LEVEL AND MSS LEVELS 3, 4, 5 & SLA INT
- CLEAR PAD, TRENCH, MSS, ML
- OPEN PAD
- CLEAR STUB TWRS

SMDPS
- 2 SW/1 VLV

LUNAR MODULE
- LM/SLA STRAY VOLT CKS
- COMM TEST
- SMALL ORDNANCE

LAUNCH VEHICLE
- SA-8 PRESS
- SA-9 PRESS
- Q BALL PWR ON
- LV INSTALL F-1 ENGINE ORDNANCE
- LV INITIATOR/DETONATOR HOOKUP

ORDNANCE (PER FO-K-4617)
- STRAY VOLTAGE CKS
- ELS
- CIRC INTER
- RCS
- CSM SEP
- CSM UM GULL
- TWR SEP
- CANARD & P/C
- REMOTE RESIS CKS
- HVY ORD H/U (SIM)
- LOCAL RESIS CKS

STRUCTURAL INSTALLATIONS
- S/C INSP
- RECONFIG HV-EPS & HR
- REM ANT COUPLERS
- PANEL STATUS

- T/S 8.2.1
- T/S 8.2.2
- T/S 8.2.3

ENVIRONMENTAL CONTROL SYSTEMS
- W/G ACT
- SURGE TK PRESS
- W/G PUMPS CKS
- ECS VERIFICATION TEST
- W/G DEACT
- INSTR VERIF
- SUIT COMPRESSOR CKS
- CABIN FAN CKS
- SURGE TK/EMERG O2 / SUIT CK PURGE

-116 -115 -114 -113 -112 -111 -110 -109 -108 -107 -106 -105 -104 -103 -102 -101 -100 -99 -98 -97 -96 -95 -94 -93 -92 -91 -90 -89 -88 -87 -86 -85 -84 -83 -82 -81 -80 -79 -78

FUEL CELL & CRYOGENICS
- WALKDOWN
- GSE POWER UP
- LOAD LH2 DEWARS
- LOAD LO2 DEWARS
- TO BE SCHEDULED ON 1ST SHIFT
- GN2 BLANKET INITIATION
- O2 & H2 POD LK CK (GHE)
- VACUUM PURGE
- LO2 VENT LINE PURGE (GHE & GO2)
- LH2 VENT & FILL LINE PURGE (GHE)
- F/C GO2 & GH2 LINES PURGE & LH2 VENT LINE PURGE
- S/C TK MOIST SAMP
- F/C PRESS (GAS SUP)
- F/C GAS SUP SAMP
- CONFIG FOR ECS SUPPORT
- GSE PWR DN
- BREAK VACUUM F/C & CRYO TKS
- SURGE TANK PRESS TO 350 PSIG

STABILIZATION CONTROL SYSTEM
- ACTIVATION
- POWER DOWN
- G&C I/F

GUIDANCE & NAVIGATION
- STBY PWER ON
- POWER DOWN
- CMC OP
- OPER POWER ON
- G & N OPERATIONAL
- G&C I/F

POWER & SEQUENTIAL
- LOGIC BUS ARMED
- PYRO BUS ARMED

REACTION CONTROL SYSTEM

SERVICE PROP SYSTEM

INSTRUMENTATION
- SYSTEM TEST
- DSE DUMP
- HBR RECORD (VOICE TRACK)
- DSE LBR RECORD

COMMUNICATIONS + RF SUPPORT
- VHF AM ON
- RF SILENCE
- AUDIO CENTER ON (INTERCOM)
- GMIL VHF AM SUPPORT
- COMM SYS TEST

SUPPORT PER BCRD 40001/40000 (TIME ORIENTED ITEMS AS SHOWN)
- LH2 DEWAR DEW PT (2) - LSN-7 (3240.2.1)
- LH2 DEWAR PURITY (2) - LSN-7 (3240.2.1)
- LH2 DEWAR - LSN-8 (3240.2.2)
- LO2 DEWAR DEW PT (2) - LSN-9 (3240.2.2)
- LO2 DEWAR PURITY (2) - LSN-10 (3240.2.2)
- LO2 DEWAR - LSN-10 (3240.2.2)
- LOAD LO2 & LH2 DEWARS LSN-10,11,12 (3200.2.1)
- LH2 SYS DEW PT - LSN-2 (3240.2.0)
- GH2 TKS DEW PT (2) - LSN-6 (3240.2.1)
- GO2 TKS DEW PT (2) - LSN-5 (3240.2.1)
- GH2 PURITY (WATERMELON) - LSN-4 (3240.2.1)
- GO2 PURITY (WATERMELON) - LSN-3 (3240.2.1)
- CIF & MIL-USB - LSR 1,2 (1000.2.0)
- VHF AM, S-BAND, X-BAND CLEAR - LSN 1,2,3,4,5,7 (310.2.0)
- GMIL VHF & S BND READOUTS - LSN 1,2,3 (1400.2.0)
- GMIL USB EVALUATE S BND & AUDIO - LSN 1 (1600.2.0)
- HAZARD MON SYS LSN-13 (3200.2.2)

SC MANLOADING FOR HAZARDOUS TESTS

MSS	5
	4C
	4A
	3A
LUT	A

- 20 (AS REQ'D) ROVING
- 6

-116 -115 -114 -113 -112 -111 -110 -109 -108 -107 -106 -105 -104 -103 -102 -101 -100 -99 -98 -97 -96 -95 -94 -93 -92 -91 -90 -89 -88 -87 -86 -85 -84 -83 -82 -81 -80 -79 -78 -77 -76

LAUNCH COUNTDOWN SC 107

20 JUNE 1969
REV 1

00-083

SHEET 2 OF 6

MID COUNT

-76 -74 -72 -70 -68 -66 -64 -62 -60 -58 -56 -54 -52 -50 -48 -46 -44 -42 -40 -38 -36 -34 -32 -30 -28

GENERAL ACTIVITY
- STA CALL
- CSM POWER THROUGH LAUNCH
- GSE POWER VERIFICATION
- PLACARDS
- CSM POWER UP
- LO2& LH2 TANKING
- CSM MECH BUILDUP
- CRYO DRAIN
- LM THERMAL SHIELD INSTALL
- LM SHE LOADING PREPS
- SW LIST
- WHITE ROOM RETRACT FOR BPC INSTALL
- SHE SERVICE
- Q BALL SIM CMD
- G & N ACTIVATION

PAD ACCESS
- PAD OPEN FOR NORMAL WORK
- OPEN PAD
- CLEAR DEWAR PATH
- CLEAR PAD TO 1100 FT
- CLEAR SLA INT
- CYRO CREW

LUNAR MODULE
- COMM TEST
- SHE SERVICING
- SLA STAND STOR VAN UNTIL T-1500

LAUNCH VEHICLE
- LUT COMPUTER MAINT
- W/R RETRACTED
- Q BALL PWR ON

SMDPS
- 2 SW/1 VLV
- 1 SW/1 VLV
- 2 SW/1 VLV
- 2 SW
- 1SW

STRUCTURAL INSTALLATIONS
- INSTL CM8,17-ZBPC
- CM10 15 INSTL
- PLACARDS
- CRYO LOAD INSP
- ABLATOR PLUG INSTL
- SLA INT INSP
- BPC INSTL
- PANEL STATUS
- D13,14 INSTL
- SLA STAND STOR VAN UNTIL T-1500
- DISC PUGS/SECURE A34-388
- T/S 8.2.4

ENVIRONMENTAL CONTROL SYSTEMS
- W/G ACT & SW TO REMOTE
- SUIT SEP SERVICING

FUEL CELL & CYOGENICS
- LH2 TOPOFF & SAMPLE
- STATION CALL
- INSTALL LO2 DEWAR
- LO2 TOPOFF & SAMPLE
- LO2 DEWAR LK CK & PURGE
- F/C GSE PWR UP
- LO2 LOAD
- INSTALL LH2 DEWAR
- GO2 S/C TK SAMPLE
- LH2 SYS LK CK & PURGE
- GH2 S/C TK SAMPLE
- F/C PRESS (SIM)
- S/C TK PRESS (SIM)
- F/C HEATING CYCLE (SIM)
- LH2 FAN TEST
- CLEAR PAD-NONESS
- LH2 TKS DETANK
- LH2 DEWAR TO 4A
- LH2 LOAD PREPS
- LO2 DETANK & GUAN
- LO2 DEWAR TO +12 FT
- LH2 LOAD
- LH2 SYS INERT
- LH2 DEWAR REMOVAL

-76 -74 -72 -70 -68 -66 -64 -62 -60 -58 -56 -54 -52 -50 -48 -46 -44 -42 -40 -38 -36 -34 -32 -30 -28

STABILIZATION & CONTROL SYSTEM

GUIDANCE & NAVIGATION
- STANDBY POWER ON
- IMU PERFORMANCE
- CMC OP
- CLOCK ALIGN
- OP PWR ON
- G&N OP
- DELTA T

POWER & SEQUENTIAL
- EXTERNAL POWER ON

REACTION CONTROL SYSTEM
- PUGS CHECKOUT

SERVICE PROP SYSTEM
- DISC PUGS/SECURE A34-388

INSTRUMENTATION

COMMUNICATIONS & RF SUPPORT

SUPPORT PER BCRD 40001/40000 (TIME ORIENTED ITEMS AS SHOWN)
- LH2 DEWAR (4) - LSN-8 (3240.2.2)
- LO2 DEWAR (4) - LSN-10 (3240.2.2)
- LH2 LINE DEW PT - LSN-2 (3240.2.0)
- LO2 LINE DEW PT - LSN-12 (3240.2.2)
- S/C H2 TK (2) (WATERMELON) - LSN-14 (3240.2.3)
- S/C O2 TK (2) (WATERMELON) - LSN-13 (3240.2.3)
- DEWAR TRANSFER TO LC39 - LSN-13 (3200.2.1) LSN-15 (3200.2.2)
- LH2 DEWAR REMOVAL - LSN-14 (3200.2.2)

SC MANLOADING FOR HAZARDOUS TESTS

	MSS	4C	4A	-22	PAD	LUT A	ROVING
					7	2	
						5	
						5	
						4	
						2	
						4	

-76 -74 -72 -70 -68 -66 -64 -62 -60 -58 -56 -54 -52 -50 -48 -46 -44 -42 -40 -38 -36 -34 -32 -30 -28

LAUNCH COUNTDOWN SC 107

00-084

20 JUNE 1969
REV 1

SHEET 3 OF 6

COUNTDOWN (CDDT) -28 -27 -26 -25 -24 -23 -22 -21 -20 -19 -18 -17 -16 -15 -14 -13 -12 -11 -10 -9 -8 -7 -6 -5 -4 | WET CDDT | DRY CDDT -3 -2 -1 0

GENERAL ACTIVITY
- OFFICAL COUNTDOWN START
- CSM POWER ON THRU LAUNCH
- CSM CRYO GSE DISC
- CSM ECS SUIT SEP SERV
- LM SHE SERV PREPS
- LM SHE TOP-OFF
- ATTITUDE CMD CKS
- FT25
- SV EDS TEST
- Q BALL SIM CMD
- CMI WIPEDOWN
- REMOVE IU WATER/FREON NOZZLE
- OPEN SILO 4
- MSS PWR DWN
- CENTER COUCH INSTL.
- RF SILENCE
- SM ECS AIR FULL FLOW
- FPI CK
- PRE-INGRESS INSP
- CREW STOWAGE
- 6 HOUR BUILT-IN HOLD
- CSM PRE-INGRESS OPNS
- OPEN SILO 3
- AUX DAMPER DISC
- MOVE MSS
- PRIMARY DAMPER CONN
- CSM A/G VOICE CKS
- CSM CABIN PREPS
- CLEAR PAD
- LV TANKING
- C/O CREW DEPART W/R
- SEE SHEET 4/6 FOR WET CDDT OPERATIONS
- CSM C/O CREW TO CM
- PRE-INGRESS PREPS
- FLIGHT CREW INGRESS
- CABIN CLOSEOUT
- MCC/CSM CMD CKS
- AAS CHECKS
- W/R BREAKUP
- C/O CREW CLEAR SA-9
- RETRACT SA-9
- LES ARMED
- ASTRO LAUNCH CKT COMM CKS
- SV EDS TEST

CREW FUNCTIONS

PAD ACCESS
- CLEAR SLA
- CLEAR "O" LEVEL
- CLEAR PAD
- CSM C/O CREW TO PAD
- C/O CREW SWING ARM

LUNAR MODULE
- SECURE FREON/H2O SYS
- SHE SERV
- SHE TOPOFF
- REMOVE IU WATER/FREON NOZZLE
- LUNAR CONTACT SW CK

SMDPS
- 2 SW/1 VLV
- 1 SW/1 VLV
- 1 SW
- 2SW/ 1VLV

LAUNCH VEHICLE
- ATTITUDE CMD CKS
- Q-BALL POWER ON
- MSS ELEV 2 LOCKED OUT
- FT25
- LUT ELEV 1 RESERV
- SV EDS TEST
- RF & TM TEST
- OPEN SILO 4
- YELLOW LADDER REMOVAL
- OPEN SILO 5
- DRSCS
- MSS ELEV 2 RESERV
- JACK MSS
- MSS TO 35 FT
- CLOSE HATCH & BPC
- OPEN SILO 3
- INSTALL W/R DOOR
- LV S & A CONN
- AUX DAMPER DISC
- ECS AIR TO GN2
- TANKING

STRUCTURAL INSTALLATIONS
- REMOVE H2 DETECTOR
- DISC MSS CABLES
- CRYO LINE & SCUPPER DIS
- DIS GSE ACCESS
- INSTL SM 3,13
- INSTL CSM 7,8
- COUCH INSTL
- INSTL SLA DOORS Y, II. -Z 1
- TRICKLE PURGE DISC
- INSTL SM 4,6,7,11,12
- MSS INSPECT
- REMOVE A34-345 FLOOR PADS
- CENTER COUCH INSTL
- SA-8 ECS Y REM
- OPTICS COVER & BPC INSTL
- MSS/LUT CABLE DISC
- PREP TO OPEN SILO 4
- CREW STOWAGE
- PRE-INGRESS INSPECT
- HATCH INSP & CLOSEOUT INSP PHOTOS
- LUT/PAD INSP
- PREP TO OPEN SILO 3
- OPEN HATCH
- CLOSE HATCH
- CLOSE BPC SECURE W/R
- T/S 8.2.5
- T/S 8.2.6
- T/S 8.2.6

ENVIRONMENTAL CONTROL SYSTEMS
- SUIT SEP VERIF
- CHILLDOWN
- INTERNAL (-75 SEC)
- CABIN PURGE
- CABIN PRESS & LK CK
- DISC GSE

-28 -27 -26 -25 -24 -23 -22 -21 -20 -19 -18 -17 -16 -15 -14 -13 -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0

FUEL CELL & CRYOGENICS
- LO2 FAN TEST (TK 1)
- CRYO & F/C LINE INERT
- GSE PWR DN
- FLT CAP LK CK
- LO2 DEWAR REMOVAL

STABILIZATION CONTROL SYSTEM
- ATTITUDE CMD CKS
- ACTIVATE
- DEACTIVATE
- LV/FPI CK
- ACTIVATION (PARTIAL)
- BMAGS ON

GUIDANCE & NAVIGATION
- IMU PERFORMANCE
- OPTICAL SIGHTINGS
- E-MEMORY VERIF
- E-MEMORY VERIF
- DELTA T
- ATTITUDE CMD CKS
- GYRO COMPASS

POWER & SEQUENTIAL
- FT47
- FT25
- SV EDS TEST
- MSS PWR DWN
- EDS PWR ON
- SV EDS TEST
- PYRO & LOGIC BUSSES ARMED

REACTION CONTROL SYSTEM
- TRICKLE PURGE DISC

SERVICE PROP SYSTEM

INSTRUMENTATION

COMMUNICATION & RF SUPPORT
- A/G VOICE CKS
- VHF AM ON
- S-BAND VOICE & TM
- RF SILENCE

SUPPORT PER BCRD 40001/40000 (TIME ORIENTED ITEMS AS SHOWN)
- LO2 DEWAR REMOVAL - LSN-14 (3200.2.2)
- OPTICS TARGETS LIGHTS ON - LSN-17 (3200.2.2)
- VHF AM, S-BAND, X-BAND CLEAR - LSN 1,2,3,4,5,7 (310.2.0)
- GMIL VHF & S BND READOUTS - LSN 1,2,3,(1400.2.0)
- GMIL USB EVALUATE S-BND & AUDIO - LSN 1 (1600.2.0)

SC MANLOADING FOR HAZARDOUS TEST
- MSS 4C
- PAD
- LUT 80
- 6 / 1 CSM PERSONNEL CLEARED
- 4 9 / 2 5 / 2* *CONTINGENCY
- CLEARED EXCEPT FLIGHT CREW

-28 -27 -26 -25 -24 -23 -22 -21 -20 -19 -18 -17 -16 -15 -14 -13 -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 0

20 JUNE 1969
REV 1

LAUNCH COUNTDOWN SC 107

00-085

SHEET 4 OF 6

WET CDDT | RECYCLE TO DRY CDDT | RECYCLE FROM CDDT | PRECOUNT (LAUNCH)

-4 -2 0 +2 +4 +6 +8 +10 +12 +14 +16 -6 -4 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 -108 -106 -104 -102 -100 -98 -96 -94 -92 -90 -88 -86
-24 -22 -20 -18 -16 -14 -12 -10 -8

GENERAL ACTIVITY
- L/V TANKING
- COUNTDOWN (L/V ONLY)
- RETRACT SA-9
- L/V SAFING
- Q BALL SIM CMD
- OPEN PAD
- RECONFIG W/R & OPEN HATCH
- SYSTEM SECURING
- PUNCTURE GN2 PRESS VESSEL
- MASS SPECTR
- START COUNTDOWN CLOCK
- CLOSE HATCH & BPC
- BACK UP CREW CKS (USE ASTRO B/U CREW)
- CSM A/G VOICE CKS
- CSM CABIN PREPS
- CLOSE HATCH
- C/O CREW CLEAR PAD
- FLIGHT CREW EGRESS
- CENTER COUCH INSTL
- SILO 4 RECONFIG COMPL
- MSS IN PLACE
- MSS PWR UP
- HYPER LINE CONN
- CRYO LINE/GSE CONN
- HELIUM LINE CONN
- REMOVE CREW STOWAGE
- RFI TEST
- MSS PLACARDS
- SW LIST
- CALL TO STATION
- GSE PWR UP
- CSM PWR UP
- WATER SERVICING (PWR ON)
- WATER SERVICING (PWR OFF)
- CSM PWR DN
- GSE PWR DN
- SET UPS (PLACARDS)
- HEAVY ORD H/U

PAD ACCESS
- PAD OPEN
- OPEN PAD
- CLEAR STUB TWRS
- CLEAR SLA INT
- CLEAR PAD EXCEPT PYRO PERS
- CLEAR PAD EXCEPT CSM PYRO
- CLEAR "O" LEVEL

LUNAR MODULE
- SLA STAND STOR VAN AVAILABLE

LAUNCH VEHICLE
- DAMPER SW - OVER
- SILO 5 AVAIL
- SILO 3 AVAIL
- SILO 4 AVAIL
- CSM ORDNANCE
- BRIDGE SETUP
- REMOTE RESIS CKS
- LE & TJ INSTL & H/U
- SLA INSTL & H/U
- BRIDGE SETUP
- SC PYRO CREW TO COMPT 1A

SMDPS
- 1 SW
- 2 SW/1 VLV
- 2 SW/1 VLV
- 2 SW

STRUCTURAL INSTALLATIONS
- RECONFIGURE W/R & OPEN HATCH
- PRE-INGRESS INSPECT
- HATCH C/O INSP
- INSTALL CO2 ABS.
- HATCH C/O INSPECT
- GN2 BOTTLE PUNCT
- POST CREW EGRESS INSP
- CENTER COUCH REMOVAL
- SLA STAND STOR VAN AVAILABLE
- REMOVE CREW STOWAGE
- SA-8 ECS "Y" INSTL
- S/C INSPECT (6 HOURS)
- PANEL STATUS
- T/S 8.2.6
- T/S 8.2.7
- T/S 8.2.7
- T/S 8.2.8

ENVIRONMENTAL CONTROL SYSTEMS
- SUIT CKT LK CK, PURGE & SAMPLE
- SAMPLE FAC 60/40 MIX
- ECS CHILLDOWN
- 33 HRS
- SECURE
- WATER SERVICING (PWR OFF)
- WATER SERVICING (PWR ON)
- SETUPS (18 HRS)
- POT & WASTE TK VERIF
- S/C EVAC & FILL (8 HRS)
- S/C FINAL FLUSH & FILL
- SAMPLE
- DRAIN, FLUSH REFILL S14-119 (7 HRS)

FUEL CELLS & CRYOGENICS
- CRYO GSE CONN
- F/C ENG WALKDOWN
- PLACARDS
- GSE PWR UP
- O2 & H2 SYS LK CK
- F/C & CRYO LINES PURGE
- LO2 TK2 DETANK
- O2 & H2 POD LK CK
- LH2 FILL SYS INERTING
- GSE PWR DN

-4 -2 0 +2 +4 +6 +8 +10 +12 +14 +16 -6 -4 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 -106 -104 -102 -100 -98 -96 -94 -92 -90 -88 -86
-24 -22 -20 -18 -16 -14 -12 -10 -8

STABILIZATION CONTROL SYSTEM

GUIDANCE & NAVIGATION
- E-MEM VERIF

POWER & SEQUENTIAL

REACTION CONTROL SYSTEM

SERVICE PROP SYSTEM

INSTRUMENTATION

COMMUNICATIONS & RF SUPPORT
- GMIL SUPPORT S-BAND VHF AM
- CIF/MSO CSM PCM H/L
- RF SILENCE

SUPPORT PER BCRD 40001/40000 (TIME ORIENTED ITEMS AS SHOWN)
- MASS SPECTR LSN-18 (3200.2.2)
- GO2 (WATERMELON) - LSN-19 (3240.2.4)
- FAC 65/35 - LSN 74 (3240.2.17.8)
- FAC 65/35 PREP -LSN 17 (3230.2.2)
- GO2 PURITY (WATERMELON) LSN-3 (3240.2.0)
- GH2 PURITY (WATERMELON) LSN-4 (3240.2.1)
- LH2 SYS DEW PT LSN-2 (3240.2.0)

SC MANLOADING FOR HAZARDOUS TESTS

-4 -2 0 +2 +4 +6 +8 +10 +12 +14 +16 -6 -4 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 -106 -104 -102 -100 -98 -96 -94 -92 -90 -88 -86
-24 -22 -20 -18 -16 -14 -12 -10 -8

LAUNCH COUNTDOWN SC 107

20 JUNE 1969
REV 1

00-086

SHEET 5 OF 6

MID COUNT

-84 -82 -80 -78 -76 -74 -72 -70 -68 -66 -64 -62 -60 -58 -56 -54 -52 -50 -48 -46 -44 -42 -40 -38 -36 -34 -32 -30 -28

GENERAL ACTIVITY
- OPEN PAD
- GHE & GOX SERV PREPS
- PLACARDS & PRE-POWER SW LIST
- LM/CSM GHE/GOX SERVICING & PROP LINE DISC
- CSM POWER ON THROUGH LAUNCH
- CSM CALL TO STATIONS
- GSE POWER VERIF
- CSM POWER UP
- LM THERMAL SHIELD INSTALL
- MECH BUILDUP, BATT HOOKUP
- FUEL CELL ACT
- LM SHE LOADING PREPS
- CSM LO2 & LH2 LOAD
- CRYO PRESS
- WHITE ROOM RETRACT FOR BPC INSTALL
- G & N ACTIVATION
- △ Q BALL SIM CMD

PAD ACCESS
- OPEN PAD
- HE DISC CREW TO PAD
- CLEAR PAD
- CLEAR PAD
- CLEAR SLA, IU NON-ESS MSS LEVEL 3
- CLEAR DISC CREW TO PAD
- OPEN PAD
- PAD OPEN FOR OPEN WORK
- CLEAR SLA
- CMI CLEARED
- CRYO CREW
- CLEAR PAD
- OPEN PAD
- CLEAR DEWAR PATH
- CLEAR PAD

CONDITION

LUNAR MODULE

LM GOX
- ENG WALKDOWN
- LM PWR UP
- GSE PWR UP
- PRESS A/S. D/S TO 25% D.B.
- PRESS A/S. D/S TO REG L/U
- CLOSE A/S O2 VALVES
- PRESS D/S TK
- DISC GOX LINES
- SHE SERVICE

LM GHE
- ENG WALKDOWN
- GSE PWR UP
- FDS LK CK
- S/C GHE LINE CONN
- OPEN PROP QD
- PRESS A/S & D/S PROP TKS
- CLOSE FUEL & OX Q.D.
- GHE LOAD
- DISC FUEL Q.D.
- DISC & REM SLA GHE GSE
- DISC & REM PROP CONTR
- DISC HE Q.D.
- DISC OX Q.D.
- COMPUTER MAINT
- W/R RETRACTED

LAUNCH VEHICLE

SMDPS: 2 SW | 2 SW/1 VLV | 2SW | 2 SW/1 VLV | 1 SW, 1 VLV | 2 SW 1VLV | 2 SW | 1SW

STRUCTURAL INSTALLATIONS
- INSTL CM8, 17, -2BPC
- ABLATOR PLUG INSTL
- CM10, 15 INSTL
- BPC INSTL
- D13, 14 INSTL
- DISC PUGS, REM A34-388
- SM 8 (4) INSTL (LOWER)
- CRYO LOAD INSP
- SLA INT INSP
- PANEL STATUS
- T/S 8.2.9

ENVIRONMENTAL CONTROL SYSTEMS
- W/G ACTIVATION
- SURGE TANK TO 350 PSIG
- EVAP WICK WETTING
- SURGE TK PRESS

FUEL CELL & CRYOGENICS
- LH2 TOPOFF & SAMPLE
- LO2 TOPOFF & SAMPLE
- STATION CALL
- PAD PRESS & S/C TK MOIST
- INSTALL LH2 DEWAR
- LH2 SYS LK CK & PURGE
- FC GSE PWR UP
- LH2 DEWAR TO 4A
- LO2 DEWAR TO +12 FT
- ENG WALKDOWN
- F/C PRESS
- F/C HEAT
- F/C CAL
- FC COND -25 AMP MIN.
- REMOVE FC FROM BUS
- LH2 LOAD
- CLEAR PAD NON-ESS
- LH2 LOAD PREPS
- LH2 SYS INERT
- LH2 DEWAR REMOVAL
- INSTALL LO2 DEWAR
- LO2 DEWAR LK CK
- LH2 S/C TANK SAMPLING
- LO2 LOAD
- LO2 S/C TK SAMPLE
- SURGE TK PRESS
- FC & CR.O SYS INERT
- CRYO GSE PWR DN
- CLEAR PAD
- S/C TK PRESS

-84 -82 -80 -78 -76 -74 -72 -70 -68 -66 -64 -62 -60 -58 -56 -54 -52 -50 -48 -46 -44 -42 -40 -38 -36 -34 -32 -30 -28

STABILIZATION & CONTROL SYSTEM

GUIDANCE & NAVIGATION
- STANDBY POWER ON
- IMU PERFORMANCE
- CMC OP
- CLOCK ALIGN
- OP PWR ON
- G&N OP
- DELTA T

POWER & SEQUENTIAL
- EXTERNAL POWER ON
- LIGHTING CHECK

REACTION CONTROL SYSTEM
- ENG WALKDOWN
- GSE PWR UP
- S14-009 LN2 LOAD
- DISC PUGS, REM A34-388
- CLEAR CREW TO PAD
- GHe LOADING

SERVICE PROP SYSTEM
- LOAD HE TANKS TO 500 PSIA
- SPS TRICKLE PURGE DISC
- CLEAR CREW TO MSS
- CLEAR PAD
- GHe LINE DISCONNECT
- DISCONNECT FUEL STUB TWR LINES
- CLEAR PAD
- DISCONNECT & REMOVE TVD, LIQ SEP FAC TANKER LINES
- DISCONNECT OXID STUB TWR
- OPEN PAD
- LINES DISCONNECT, REMOVE TVD, LIQ SEP FAC TANKER LINES
- PUGS QUAN ADJ

INSTRUMENTATION

COMMUNICATIONS & RF SUPPORT

SUPPORT PER BCRD 40001/40000 (TIME ORIENTED ITEMS AS SHOWN)
- △ LH2 DEWAR (4) - LSN-8 (3240.2.2)
- △ LO2 DEWAR (4) - LSN-10 (3240.2.2)
- △ LH2 LINE DEW PT - LSN-2 (3240.2.0)
- △ LO2 LINE DEW PT - LSN-12 (3240.2.2)
- △ S/C H2 TK (2) (WATERMELON) - LSN-14 (3240.2.3)
- △ S/C O2 TK (2) (WATERMELON) - LSN-13 (3240.2.3)
- △ DEWAR TRANSFER TO LC39 - LSN-13 (3200.2.1) LSN-15 (3200.2.2)
- △ LH2 DEWAR REMOVAL - LSN-14 (3200.2.2)

SC MANLOADING FOR HAZARDOUS TESTS

MSS	4C	4A	-22	PAD	STUB TWR	LUT	ROVING
	9	10	2				3
		8		14	3		6
			7				
	2	6	5	4		2	5

-88 -86 -84 -82 -80 -78 -76 -74 -72 -70 -68 -66 -64 -62 -60 -58 -56 -54 -52 -50 -48 -46 -44 -42 -40 -38 -36 -34 -32 -30 -28

LAUNCH COUNTDOWN SC 107

20 JUNE 1969
REV 1

00-087

SHEET 6 OF 6

COUNTDOWN

-28 -27 -26 -25 -24 -23 -22 -21 -20 -19 -18 -17 -16 -15 -14 -13 -12 -11 -10 -9 -9 -8 -7 -6 -5 -4 -3 -2 -1 0

GENERAL ACTIVITY
- OFFICIAL COUNTDOWN START
- CSM POWER ON THRU LAUNCH
- CSM CRYO GSE DISC
- CSM ECS SUIT SEP SERV
- LM SHE SERV PREPS
- LM SHE TOP-OFF
- ATTITUDE CMD CKS
- FT25
- Q BALL SIM CMD
- SV EDS TEST
- CREW STOWAGE
- REMOVE SA-8 ECS "Y"
- FPI CK
- RF SILENCE
- CSM PRE-INGRESS OPNS
- OPEN SILO 4
- CSM A/G VOICE CKS
- CSM CABIN PREPS
- OPEN SILO 3
- AUX DAMPER DISC
- CENTER COUCH INSTL.
- PRE-INGRESS INSP
- MSS PWR DN
- MOVE MSS
- PRIMARY DAMPER CONN
- 6 HOUR BUILT-IN HOLD
- CSM C/O CREW TO CM
- PRE-INGRESS PREPS
- FLIGHT CREW INGRESS
- CABIN CLOSE OUT
- MCC/CSM CMD CKS
- SV EDS TEST
- Q BALL SIM CMD
- CLEAR PAD
- LV TANKING
- AAS CHECKS
- C/O CREW CLEAR PAD
- RETRACT SA-9
- LES ARMED
- C/O CREW DEPART W/R
- ASTRO LAUNCH CKT COMM CKS

CREW FUNCTIONS

PAD ACCESS
- CLEAR SLA INT
- CLEAR PAD
- CSM C/O CREW TO PAD
- C/O CREW CLEAR PAD

LUNAR MODULE
- SHE SERV PREPS
- SHE TOP-OFF
- LUNAR CONTACT SW CK

SMDPS
- 2 SW/1 VLV
- 1 SW/ 1 VLV
- 1 SW

LAUNCH VEHICLE
- Q-BALL POWER ON
- ATTITUDE CMD CKS
- FT47
- FT25
- SV EDS TEST
- YELLOW LADDER REMOVAL
- LV S & A CONN
- OPEN SILO 4
- AUX DAMPER DISC
- OPEN SILO 5
- JACK MSS
- OPEN SILO 3
- INSTALL W/R DOOR
- MSS TO 35 FT
- REMOVE SA-8 ECS "Y"
- FPI CK
- Q BALL PWR ON
- TANKING

STRUCTURAL INSTALLATIONS
- REMOVE H2 DETECTOR
- SM 12
- DISC MSS CABLES
- CRYO LINE & SCUPPER DISC
- DISC GSE ACCESS
- INSTL SM 3,13
- INSTL CSM 7,8
- COUCH INSTL (L&R)
- INSTL SLA DOORS +Y II, -Z I
- INSTL SM 4,5,6,7,11,
- GN2 BOTTLE PUNCTURE
- REMOVE A34-345 FLOOR PADS
- MSS INSP
- MSS INSPECT
- SA-8 ECS Y REMOV
- CREW STOWAGE
- CENTER COUCH INST.
- CO2 CAN INSTL
- PREP TO OPEN SILO 4
- PRE-INGRESS INSPECT
- HATCH CLOSEOUT INSPECT
- LUT/PAD INSP
- MSS/LUT CABLE DISC
- PREP TO OPEN SILO 3
- T/S 8.2.10
- OPEN HATCH
- CLOSE HATCH
- CLOSE BPC & SECURE W/R
- T/S 8.2.11

ENVIRONMENTAL CONTROL SYSTEMS
- SUIT SEP VERIF
- POT H2O SAMPLE & GSE DISCONN.
- CO2 CAN INSTL
- SUIT CIRCUIT PURGE
- SAMPLE FAC 60/40 MIX
- CHILLDOWN
- POTABLE H2O CHLORINATION
- CABIN PURGE
- CABIN PRESS & LK CK
- DISC GSE
- INTERNAL -135 SEC.

-28 -27 -26 -25 -24 -23 -22 -21 -20 -19 -18 -17 -16 -15 -14 -13 -12 -11 -10 -9 -9 -8 -7 -6 -5 -4 -3 -2 -1 0

FUEL CELL & CRYOGENICS
- FLIGHT CAP LK CKS
- S/C GSE REMOVAL
- LO2 DEWAR REMOVAL
- FC CONDITIONING
- FC LOADED TO MINIMIZE CRYO USAGE
- FULL INTERNAL POWER
- FC CONDITIONING

STABILIZATION CONTROL SYSTEM
- ACTIVATE
- ATTITUDE CMD CKS
- DEACTIVATE
- ACTIVATION (PARTIAL)
- LV/FPI CK
- BMAGS ON

GUIDANCE & NAVIGATION
- IMU PERFORMANCE
- DELTA T
- ATTITUDE CMD CKS
- GYRO COMPASS
- E-MEMORY VERIF
- E-MEMORY VERIF

POWER & SEQUENTIAL
- FT47
- FT25
- SV EDS TEST
- MSS PWR DN
- SV EDS TEST
- PYRO & LOGIC BUSSES ARMED

REACTION CONTROL SYSTEM

SERVICE PROP SYSTEM

INSTRUMENTATION

COMMUNICATIONS & RF SUPPORT
- A/G VOICE CKS
- RF SILENCE
- VHF AM ON
- GMIL STATION CAL
- S-BAND VOICE & TM

SUPPORT PER BCRD 40001/40000 (TIME ORIENTED ITEMS AS SHOWN)
- LO2 DEWAR REMOVAL - LSN-14 (3200.2.2)
- POTABLE WATER - LSN-20 (3240.2.5)
- MASS SPECTR LSN-18 (3200.2.2)
- GO2 WATERMELON (LSN 19./3240.2.4)
- FAC 65/35 LSN 74 (3240.2.17.8)
- FAC 65/35 PREP LSN 17 (3230.2.2)
- EMERG EGRESS RESCUE TEAM LSN-21 (3200.2.2)
- S-BAND CLEARANCE -LSN 3,4,5 (310.2.0)
- VHF AM CLEARANCE -LSN 1,2 (310.2.0)
- MIL-USB STATION -LSR 1 (1000.2.0)
- GMIL VHF & S-BAND READOUTS -LSN 1,2,3 (1400.2.0)

SC MANLOADING FOR HAZARDOUS TESTS

MSS 4C
PAD
LUT 80

6
1
CSM PERSONNEL CLEARED
4 9
2 5
2 *
*CONTINGENCY
CLEARED EXCEPT FLIGHT CREW

-28 -27 -26 -25 -24 -23 -22 -21 -20 -19 -18 -17 -16 -15 -14 -13 -12 -11 -10 -9 -9 -8 -7 -6 -5 -4 -3 -2 -1 0

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		01-000			SECTION II - OPERATING PROCEDURES	
					CALL TO STATION - PRECOUNT	
-11030		01-001	MTPE	ALL	ALL CONTROL ROOM LEAD ENGINEERS' STAND BY FOR REPORT OF INGRESS/EGRESS LOG STATUS. BE READY TO ADVISE REMOVAL OF ITEMS IN COMMAND MODULE WHICH ARE NOT COMPATIBLE WITH THIS TEST.	
		01-002	MTPE	SNQC SGQC	REPORT INGRESS/EGRESS LOG STATUS NR QC NASA QC	
		01-003	MTPE	ALL	VERIFY INGRESS/EGRESS LOG COMPATIBLE WITH TEST TO BE PERFORMED. MECS MLFC MEPS MSCS MCSE MSPS MREC MGNS	

NOTE

TEST SETUPS CONTAINED IN SECT 8.0 OF VOLUME I AND II

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		01-004	MTPE	MACE	1. VERIFY COUNTDOWN CLOCK SLAVED TO LCC CLOCK. 2. VERIFY TAPE RECORDERS ON.	
	PA	01-005	MSTC	ALL	1. ALL SC STATIONS REPORT COMPLETION OF PRE-POWER SETUPS ON ASSIGNED CHANNELS AND SIDE TONE CHANNEL 222. AT COMPLETION OF REPORT ALL PERSONNEL RETURN TO CHANNEL 222. 2. DO NOT REMOVE R-START FUNCTIONS	
	222	01-006	MTPE		RECORD SETUP COMPLETION REPORTS..	

MACE REPORTS FOR ACE RACE

MECS REPORTS FOR MECE
UGCU UGTR
UWGR

MLFC REPORTS FOR MHFC SLHM
SHFD SLHT
SLOM SOMD
SLOT PLHM
PLOM

MEPS REPORTS FOR MSEQ LPDS
MEPE SPDS

MSCS REPORTS FOR MSCL
MSCR

MSPS REPORTS FOR MSPE PFRS
PORS

MREC REPORTS FOR MQLD MPUG

MGNS REPORTS FOR MGNL
MGNR

MCSE REPORTS FOR MOLC MUDL
MCRF

SPAD REPORTS FOR SFMT
SFET UFET SSMT
SCDR SLMP LFET
SCMP SCET

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		01-006			SPAD ALSO VERIFIES COMPLETION OF TCP-K-10026, 0007 PRECOUNT COLUMN AND VOL II SETUP SHEET 8.2.1(ALL)	
					CSGS	
		01-007	MSTC	MNQC MGQC	1. REPORT FOR SNQC/SGQC.	
					2. REPORT CONSTRAINTS LIST STATUS. NR QC / NASA QC	
					3. VERIFY COMPLETION OF SETUP SHEET NO. 8.32.1 V2 NR QC / NASA QC	
		01-008	MSTC	CVTS	1. VERIFY CLEARANCE TO START TEST.	
					2. POWER WILL BE APPLIED TO THE SPACECRAFT IN APPROX 30 MIN.	
					3. VERIFY SMDPS IS IN 2 SW/1 VLV MODE	
					4. HAVE OTV CAMERA 25 TURNED ON AND PATCHED TO SWITCHING MONITORS 50 AND 53.	
					5. VERIFY MSS AIR COND THERMOSTAT SET AT 70 DEG F.	*1
					6. VERIF SLA/LM AIR AND GN2 PURGE TEMP CONTROLS SET TO 67 DEF F.	*1
		01-009			NOTE FOR THE ENTIRETY OF THIS PROCEDURE, ''T/S'' SHALL BE USED FOR ''TEST SETUP SHEETS, VOL. 2''.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		02-000			GSE POWER UP - PRECOUNT	
-11000		02-001	MTPE	MECS	ACTIVATE ECS W/G GSE PER SEQ 05 V2.	
		02-002	MTPE	MLFC	START F/C WALKDOWN INSPECTION OF GSE SETUPS.	
		02-003	MTPE	MEPS	ACTIVATE GSE POWER SUPPLIES AND DISTRIBUTION SYSTEM.	
		02-004	MEPS	MQLD	VERIFY GSE FM/FM SIGNAL IS BEING RECEIVED. START GSE FM/FM MAGNETIC TAPE RECORDER.	
		02-005	MEPS	LPDS	C14-628 (PS 2) BATT. ON LITE ON FEEDER BUS B LITE ON	
					C14-628 (PS 8) BATT. ON LITE ON FEEDER BUS B AND C LITES ON	
		02-006	MEPS	UFET	C14-205 CB2 AND 19 LITES ON CB1 AND 18 OFF	
				UFET	C14-267 (UNITS 1 AND 2).. POWER ON LITE ON	
				UFET	C14-232 ELAPSED TIME METER RUNNING	
				LFET	C14-346 RACK	
					C14-261 LITE ON (THRU WINDOW)	
				SFET	C14-268 POWER ON LITE ON	
					C14-484 AM 1 LITE ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		02-007	MEPS	ALL	DOWNLINK IS COMING ON		
		02-008	MEPS	MACE	EXECUTE THE FOLLOWING R-START INSERTS..		
					D C B A		
					1. R112 1 0 1 0		
					2. R113 1 1 1 1		
					3. R114 1 0 1 0		
					4. R115 0 0 0 1		
				MACE	1. SYNC ACQUIRED		
					2. PRIME AND REDUNDANT INTERLEAVED DATA IS VERIFIED AND BEING RECORDED.		
		02-009	MEPS	MEPE	PS 2 OUTPUT ON LITE ON	GC5110	
					PS 2 GSE BUS VDC (P2-22) -----	GC5132	32.5 +/- 2
					PS 2 OUTPUT VDC (P2-15) -----	GC5114	
					PS 2 BAT ENABLE LITE ON	GC5112	
					PS 8 OUTPUT ON LITE ON	GC5116	
					PS 8 GSE BUS B ON LITE ON	GC5121	
					PS 8 GSE BUS C ON LITE ON	GC5160	
					GSE BUS PS 8 VDC (P2-22) -----	GC5134	31 +/- 1
					PS 8 BAT EN LITE ON	GC5118	
		02-010	MEPS	MSEQ	VERIFY RCS CONTROL SAFE LITE ON	CD0270	
		02-011	MEPS		PS 2 REMOTE SENSE - ON	KC7737	R088
				LPDS	C14-628 (PS 2) REMOTE/LOCAL SENSING SW - LOCAL		
		02-012	MEPS	MEPE	PS 2 BAT ENABLE - ON	KC7682	R071

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		02-013	MEPS	LPDS	C14-481 DC LOGIC A PWR ON LITE ON DC LOGIC B PWR ON LITE ON AC POWER ON LITE ON BLOWER OPERATION HEAT SINK NO. 1 FAN OFF LITE OFF HEAT SINK NO. 2 FAN OFF LITE OFF		
		02-014	MEPS		HEAT SINK NO. 1 FAN OFF LITE OFF	GC5026	
					HEAT SINK NO. 2 FAN OFF LITE OFF	GC5027	
		02-015	MEPS	MACE	1. INSERT DTCS SURVEILLANCE ROUTINE (500 LOC) 7- +000 1002		C124
					2. ACTIVATE DTCS SURVEILLANCE 33 0010 5~~102~~ 103		C124
				MACE	VERIFY GO CONDITION OF DTCS AND STANDARDS		
		02-016	MEPS MEPE	MEPE	ADJUST PS A OUTPUT TO 29.0 VDC 30 0000 1290 IS INSERTED		C076
		02-017	MEPS MEPE	MEPE	ADJUST PS B OUTPUT TO 29.0 VDC 30 0000 2290 IS INSERTED		C076
		02-018	MEPS	MEPE	PS A AC START - ON	KC7022	R100
			LPDS		PS 3 AC INPUT LITE ON		
			MEPE		S/M MTR SW OPEN LITE ON	SC2410	10C08
		02-019	MEPS	MEPE	PS A DC ON - ON	KC7698	R100
					GND PS A VDC (P1-3)	GC5024	29 +/- 2
			MEPS		PS A OUTPUT ON LITE ON	GC5124	
			LPDS		PS 3 DC POWER OUTPUT ON LITE ON		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		02-020	MEPS	MEPE	BUS A FLT ON - ON	KC7768	R075
			MEPE		GND PWR FLT BANK A ON LITE ON	GC5075	
		02-021	MEPS	MEPE	PS B AC START - ON	KC7032	R101
			LPDS		PS 4 AC POWER INPUT ON LITE ON		
		02-022	MEPS	MEPE	PS B DC ON - ON	KC7702	R101
			MEPE		PS B OUTPUT ON LITE ON	GC5128	
					GND PS B VDC (P1-3)	GC5028	29 +/- 2

			LPDS		PS 4 DC POWER OUTPUT ON LITE ON		
		02-023	MEPS	MEPS	BUS B FLT ON - ON	KC7769	R075
			MEPS		GND PWR FLT BANK B ON LITE ON	GC5076	
		02-024	MEPS	SPDS	C14-626 (PS 1) AC INPUT POWER ON LITE ON DC OUTPUT POWER ON LITE ON		
					C14-628 (PS 1) FEEDER BUS B ON LITE ON		
		02-025	MEPS		PS 1 OUTPUT ON LITE ON	GC5138	10C22
					PS1 OUT VDC (P2-15)	GC5141	29 +/- 1

					PS 1 BAT ENABLE LITE ON	GC5140	
					PS 1 BAT ON LITE ON	GC5139	
					GSE BUS PS 1	GC5149	29 +/-
					(P2-23) VDC		1

		02-026	MEPS		PS 5 AC START - ON	KC7709	R094
			SPDS		C14-626 (PS 5) AC INPUT POWER ON LITE ON		
		02-027	MEPS		PS 5 DC ON - ON	KC7710	R094
			MEPS		PS 5 OUTPUT ON LITE ON	GC5143	
					PS 5 OUTPUT VDC (P2-15)	GC5146	31 +/- 1

					GSE BUS PS 5	GC5150	31 +/-
					(P2-23) VDC		1

					PS 5 BAT ON LITE OFF	GC5144	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		02-028	MEPS	MEPE	FEEDER BUS B - ON	KC7713 C076
			MEPE		220 3234 321 IS INSERTED	
			SPDS		C14-628 (PS 5) FEEDER BUS B ON LITE ON	
			MEPE		PS 5 GSE BUS B ON LITE ON	GC5147
		02-029	MEPS	MEPE	FEEDER BUS C - ON	KC7714 C076
					220 3234 331 IS INSERTED	
			MEPE		PS 5 GSE BUS C ON LITE ON	GC5148 10C28
		02-030	MEPS		PS 5 BATT ENABLE - ON	KC7711 R094
			MEPE		PS 5 BAT ENABLE LITE ON	GC5145
		02-031	MEPS	SFET	C14-590	
					1. PANEL PWR SW - ON	
					2. MAIN PWR CB1 - ON	
					3. JB1, 5, 6, 7 AND 8 - ON	
					4. GIVE TP1 THRU TP22 LITE STATUS	
					5. ALL TP'S SHOWING NO - GO LITES OR NO LITE MAY BE SWITCHED TO OVERRIDE.	
					6. VERIFY FDS GO LITE ON	
			MTPE		GSE PURGE GO LITE ON GSE PURGE NO - GO LITE OFF	GV0014 GV0015
		02-032	MEPS	SFMT	S14-132	
					1. J BOX NO. A5 VERIFY.. CB - CLOSED	
					2. J BOX NO. A6 VERIFY.. CB - CLOSED	
		02-033	MEPS	MTPE	GSE POWER IS UP.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		02-034			NOTE		
					PERFORM THE FOLLOWING IF REQUIRED.		
					PS 8 LOCAL TO REMOTE		
	223	02-035	MEPS	LPDS	C14-626, P/S 8 VERIFY.. AC INPUT POWER ON LITE ON DC OUTPUT POWER ON LITE ON		A1E
	223	02-036	MEPS	MEPE	VERIFY.. PS 8 OUTPUT ON LITE ON PS 8 BAT EN LITE ON	GC5116 10C18 GC5118	
	223	02-037	MEPS	LPDS	C14-626, P/S 8 DC OUTPUT POWER OFF SW - ON		
				MEPE	PS 8 OUTPUT LITE OFF PS 8 BAT ON LITE ON	GC5116 10C18 GC5117 10C19	
				LPDS	C14-626, P/S 8 DC OUTPUT POWER ON LITE OFF		
	223	02-038	MEPS	LPDS	C14-626, P/S 8 AC INPUT POWER STOP SW - ON		
				LPDS	C14-626, P/S 8 AC INPUT POWER ON LITE OFF		
	223	02-039	MEPS	LPDS	C14-628, (PS 8) PWR SUPPLY INPUT ENABLE SW - REMOTE PWR SUPPLY OUTPUT ENABLE - REMOTE CONTROL SELECT SW - REMOTE		
	223	02-040	MEPS	MEPE	PS 8 AC START - ON	KC7686 R075	
				LPDS	C14-626, P/S 8 AC INPUT POWER ON LITE ON		A1E

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
	223	02-041	MEPS	MEPE	PS 8 DC ON - ON	KC7687	R075
			MEPE		PS 8 OUTPUT LITE ON	GC5116	10C18
			LPDS		C14-626, P/S 8 DC OUTPUT POWER ON LITE ON		A1E
	223	02-042	MEPS	MEPE	PS 8 BAT RESET - ON	KC7689	R067
	223	02-043	MEPS	MEPE	PS 8 BAT ENABLE - ON	KC7688	R075
	223	02-044	MEPS	LPDS	C14-628 (PS 8) BATTERY BACK UP SW - OFF		
				LPDS	BATTERY ON LITE REMAINS ON		
				MEPE	PS 8 BAT EN LITE REMAINS ON PS 8 BAT ON LITE OFF	GC5118 GC5117	 10C19
	223	02-045	MEPS	MEPE	PS 8 FEEDER BUS B - ON	KC7690	C076
			MEPE		22 0212 4331 IS INSERTED		
	223	02-046	MEPS	MEPE	PS 8 FEEDER BUS C - ON	KC7691	C076
			MEPE		22 0212 4341 IS INSERTED		

CAUTION

SLOW SWITCHING OF THE FOLLOWING TWO FEEDER BUS SWITCHES FROM LOCAL TO REMOTE COULD RESULT IN A POWER LOSS DUE TO THE BREAK BEFORE MAKE ACTION OF THE SWITCHES.

	223	02-047	MEPS	LPDS	PS 8 FEEDER BUS B - REMOTE		
			LPDS		BUS B FEEDER LITE REMAINS ON		
	223	02-048	MEPS	LPDS	PS 8 FEEDER BUS C - REMOTE		
			LPDS		BUS C FEEDER LITE REMAINS ON		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
	223	02-049	MEPS	MECS	400 HZ PRI - ON	KC7693 R016
	223	02-050	MEPS	MECS	400 HZ BU - ON	KC7694 R016
	223	02-051	MEPS	CSGS	LCC MOBILE LAUNCHER PWR 400 CPS SW - ON	
			CSGS		ACTIVATE LITE REMAINS ON	
	223	02-052	MEPS	MECS	400 HZ PRI - OFF	KC7693 R016
			CSGS		ACTIVATE LITE OFF	
			LPDS		LOAD TO BU UNIT LITE ON	
	223	02-053	MEPS	MECS	400 HZ PRI PWR - ON	KC7693 R016
			CSGS		ACTIVATE LITE ON	
			LPDS		LOAD TO PRIMARY UNIT LITE ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		03-000			SC BUS POWER UP - PRECOUNT		
		03-001	MTPE	MEPS	POWER UP CSM.		
		03-002	MEPS	MSEQ	MESC INDICATE PWR - ON	KD7021	R084
			MSEQ		SMJC A SAFE LITE ON	SD0352	
					SMJC B SAFE LITE ON	SD0353	
					LOGIC BUS SAFE LITE ON	CD0088	
					PYRO BUS SAFE LITE ON	CD0218	
					MESC SYS A SAFE LITE ON	CD0084	
					MESC SYS B SAFE LITE ON	CD0085	
		03-003	MEPS	SLMP	PANEL 3 - VERIFY NO DC VOLTAGE OR CURRENT INDICATIONS ON ALL POSITIONS		
		03-004	MEPS	SCMP	PANEL 250		
					BAT A PWR ENTRY/PL CB - CLOSE	250C020	
					BAT B PWR ENTRY/PL CB - CLOSE	250C021	
					BAT C PWR ENTRY/PL CB - CLOSE	250C022	
					BAT C BAT CHGR/EDS 2 CB - CLOSE	250C023	
					PYRO A SEQ A CB - CLOSE	250C016	
					PYRO B SEQ B CB - CLOSE	250C017	
		03-005	MEPS	SLMP	PANEL 3 - READOUT DC INDICATIONS..		
					PYRO A VDC		35.5 +/-2.5
					PYRO B VDC		35.5 +/-2.5
					BAT BUS A VDC		35.5 +/- 2.5
					BAT BUS A AMPS		ENG INFO
					BAT BUS B VDC		35.5 +/- 2.5
					BAT BUS B AMPS		ENG INFO
					BAT C VDC		35.5 +/- 2.5
					BAT C AMPS		ENG INFO

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARK
		03-005		SCMP	PANEL 250		
					PYRO A SEQ A CB - OPEN	250C016	
					PYRO B SEQ B CB - OPEN	250C017	
					VERIFY NOT MORE THAN 20 VDC ON ALL OTHER POSITIONS		
		03-006	MEPS	SLMP	PANEL 3		
					FC1		
					MN BUS A TB-BP		
					MN BUS B TB-BP		
					FC2		
					MN BUS A TB-BP		
					MN BUS B TB-BP		
					FC3		
					MN BUS A TB-BP		
					MN BUS B TB-BP		
		03-007	MEPS	MEPE	PS A TO BUS A - ON	KC7024	R100
					PS B TO BUS B - ON	KC7034	R101
					GND PS A VDC (P1-3) -----	GC5024	30+/-2
					GND PS A AMPS (P1-4) -----	GC5025	ENG INFO
					GND PS B VDC (P1-3) -----	GC5028	30+/-2
					GND PS B AMPS (P1-4) -----	GC5029	ENG INFO
		03-008	MEPS	UFET	C14-205		
					CB17 - CLOSE		
					CB2, 13, 15, 17, 19 LITES ON		
			MEPS		MTR SW PS VOLTS VDC (P2-21) -----	GC5030	38 +2/-0
		03-009	MEPS		SM MTR SW OPEN LITE ON	SC2410	
		03-010	MEPS	MEPE	SM MTR SW CLOSE - ON	KC7636	R102
			MEPS		SM MTR SW OPEN LITE OFF	SC2410	10C18

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		03-011	MEPS		PS A REMOTE SENSE SW - ON	KC7738	R089
					PS B REMOTE SENSE SW - ON	KC7739	R090
		03-012	MEPS	SLMP	PANEL 3		
					MN BUS A _____ VDC		29 +/-2
					MN BUS B _____ VDC		29+/-2
					MN BUS A RESET - RESET, REL	003S017	
					MN BUS B RESET - RESET, REL	003S026	
		03-013	MEPS	SCMP	PANEL 225		
					CTE		
					MNA CB - CLOSE	225C021	
					MNB CB - CLOSE	225C022	
		03-014	MEPS	MECS	VERIFY ECS GSE COOLING IS OPERATIONAL.		
		03-015	MEPS	SLMP	PANEL 3		
					AC INV 1 Sw - MNA	003S057	
					AC INV 2 Sw - MNB	003S058	
				MEPE	HRS _____ MIN _____ SEC _____		
		03-016	MEPS	SLMP	PANEL 3		
					AC INV 1 AC BUS 1 SW - (ON-UP)	003S060	
				SLMP	BUS 1 PHASE A _____ VAC		115 +/-5
					BUS 1 PHASE B _____ VAC		115 +/-5
					BUS 1 PHASE C _____ VAC		115 +/-5

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARK
		03-016			AC INV 2 AC BUS 2 SW - (ON-UP) 003S065	
					BUS 2 PHASE A ----- VAC	115 +/- 5
					BUS 2 PHASE B ----- VAC	115 +/- 5
					BUS 2 PHASE C ----- VAC	115 +/- 5
		03-017	MEPS	SLMP	PANEL 3	
					AC BUS 1 RESET SW - RESET, REL 003S063 AC BUS 2 RESET SW - RESET, REL 003S067	
					PANEL 5	
					C/W MN A CB - CLOSE C/W MN B CB - CLOSE	
		03-018	MEPS	SCMP	PANEL 2	
					C/W PWR SW - 1 002S009 C/W NORM SW - NORMAL 002S007	
		03-019	MEPS	SCDR	PANEL 1	
					MASTER ALARM PB - RESET 001S001	

NOTE

THE FOLLOWING C AND W LITES
ON PANEL 2 WILL BE ON

FC 1
FC 2
FC 3
SUIT COMPRESSOR
SM RCS A
SM RCS B
SM RCS C
SM RCS D
SPS PRESS
CRYO PRESS
CMC

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		03-020	MEPS	SCMP	PANEL 2		
					C/W NORMAL SW - ACK	002S007	
					PCM ACTIVATION		
		03-021	MTPE	MREC	ACTIVATE PCM AND OPERATIONAL INSTR.		
		03-022	MREC	UFET	C14-205		
					CB 6 - CLOSED		
			UFET		CB6 LITE ON		
		03-023	MREC	SCMP	PANEL 225		
					SIG COND CB - CLOSE	225C016	
					UDL FLT BUS CB - CLOSE	225C010	
		03-024	MREC	SLMP	PANEL 3		
					UP TLM CMD SW - RESET THEN OFF	003S039	
		03-025	MREC	SLMP	PANEL 4		
					TELCOM		
					GRP 1 SW - AC1	004S004	
					GRP 2 SW - AC2	004S005	
		03-026	MREC	ALL	STANDBY FOR MOMENTARY LOS		
		03-027	MREC	MACE	IN R112 INSERT 0000		R112
		03-028	MREC	MACE	VERIFY PCM SYNC ACQUIRED AND PRIME FRAME COUNTER COUNTING VERIFY ANALOG AND DIGITAL STANDARDS.		
		03-029	MREC		VERIFY AND RECORD		
					PCM TIMING EXT - ON	CT0340	
					CTE COUNTING (PROPER ADVANCE) (P11-01)	CT0145	
					PCM BIT RATE NORM (01100110) (P11-05)	CT0120	
					PCM HI LEVEL 85 PERCENT (P11-04) VDC	CT0125	4.2-4.3

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARK
		03-029			PCM HI LEVEL 15 PERCENT (P11-04) VDC	CT0126	0.7-0.8
		03-030	MREC	SLMP	PANEL 3		
					NOTE MASTER ALARM MAY ACTIVATE WHEN SCE SWITCH IS SET TO NORM. IDENTIFY AND RESET.		
					PWR SCE SW - NORM	003S052	
					TIME GMT		
		03-031	MREC		VERIFY AND RECORD		
					SCE POS SUP VDC (P11-02)	CT0015	19.5-20.5
					SCE NEG SUP VDC (P11-02)	CT0016	-19.5 -20.5
					SENS EXCIT +5V VDC (P11-03)	CT0017	4.8-5.2
					SENS EXCIT +10V VDC (P11-03)	CT0018	9.6-10.4
		03-032	MTPE	SLMP	PANEL 5		
					INST ESS MNA CB - CLOSE ESS MNB CB - CLOSE	005C019 005C020	
			MSEQ		ELS SAFE LITES (8) ON	CE0310 THRU CE0317	
		03-033	MREC	MTPE	PCM AND OPERATIONAL INSTR ACTIVATION COMPLETE		
			MEPS		BAT RLY BUS VDC (P1-15)	CC0232	35.5 +/-2.5

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		04-000			TEST OPERATIONS - PRECOUNT		
-10930		04-001	MSTC	CVTS	CSM PWR IS ON.		
		04-002	MTPE	SCDR	PANEL 8		
					SECS		
					ARM A CB - CLOSE	008C001	
					ARM B CB - CLOSE	008C002	
					LOGIC A CB - CLOSE	008C003	
					LOGIC B CB - CLOSE	008C004	
					RCS LOGIC		
					MNA CB - CLOSE	008C043	
					MNB CB - CLOSE	008C044	
					SECS LOGIC 1 SW - (ON - UP)	008C011	
				MSEQ	LOGIC BUS ARMED LITE ON	CD0089	
					LOGIC BUS SAFE LITE OFF	CD0088	
		04-003	MTPE	SCMP	PANEL 2		
					RCS CMD SW - OFF, REL	002S043	
					RCS TRNFR SW - SM, REL	002S044	
				MSEQ	GSE SM RCS RESET A AND B - ON	KR9422	R080
					RCS ENABLE A LITE OFF	CD0170	
					RCS ENABLE B LITE OFF	CD0171	
					MESC SYS A SAFE LITE ON	CD0084	
					MESC SYS B SAFE LITE ON	CD0085	
					RCS CONTROL SAFE LITE ON	CD0270	
					SMJC A AND B SAFE LITES ON	SD0352	
						SD0353	
					PYRO BUS SAFE LITE ON	CD0218	
					PYRO BUS ARMED LITE OFF	CD0219	
		04-004	MTPE	SCDR	PANEL 8		
					SECS		
					LOGIC 1 SW - OFF	008S011	
					LOGIC A CB - OPEN	008C003	
					LOGIC B CB - OPEN	008C004	
					ARM A CB - OPEN	008C001	
					ARM B CB - OPEN	008C002	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		04-005	MTPE	SLMP	PANEL 4 ECS GLYCOL PUMPS SEL - 2 AC2 0045002 TIME ----------	
-10800		04-006	MTPE	CTSC	VERIFY LO2 AND LH2 DEWAR FILL AND SAMPLE COMPLETE	
		04-007	MLFC	MTPE	F/C WALKDOWN INSPECTION COMPLETE. SYSTEM READY TO SUPPORT PRECOUNT OPERATIONS.	
		04-008	MTPE	MLFC	PROCEED WITH FUEL CELL OPERATIONS PER SEQ 15 V2.	
-10730		04-009	MLFC	MTPE	FC GSE PWR UP COMPLETE. PROCEEDING WITH GN2 BLANKET INITIATION.	
		04-010	MTPE	SCDR	PANEL 326 02 SM SUPPLY VLV - OFF	
-10700		04-011	MLFC	MTPE	GN2 BLANKET INITIATION COMPLETE. PROCEEDING WITH POD LEAK CHECK.	
-10500		04-012	MLFC	MTPE	FC POD LEAK CHECK COMPLETE PROCEEDING WITH FC AND CGSS VACUUM PURGE. SEND SLMP TO CH 224.	
		04-013	MLFC	MTPE	2 HOUR VACUUM MONITOR HAS STARTED. BEGINNING LO2 AND LH2 FILL LINE PURGES. SEND SLMP TO CH 224. VERIFY SAFETY CLEARANCE TO FLOW GH2 AND GO2.	
		04-014	MSTC	CVTS	1. VERIFY CPSS CLEARANCE TO FLOW GH2 AND GO2. 2. VERIFY HAZARD MONITOR SYSTEM ACTIVE. 3. HAVE SEHZ REPORT TO MTPE ON CH 222.	
		04-015	MTPE	MLFC	CLEAR TO FLOW GH2 AND GO2	

TIME	COMM CM	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-10500		04-016	MTPE	CTSC	PROVIDE MOISTURE SAMPLING EQUIP ON 4A IN 30 MIN. MEASUREMENTS WILL BE MADE IN 90 MIN.	
-10430		04-017	MTPE	CTSC	PROVIDE GO2 AND GH2 SAMPLE BOTTLES ON 4A IN 30 MIN. SAMPLES WILL BE DRAWN IN 2.5 HOURS.	
-10300		04-018	MLFC	MTPE	LO2 FDS PURGES COMPLETE. PROCEEDING WITH LH2 FDS PURGE.	
-10215		04-019	MLFC	MTPE	LH2 FDS PURGE COMPLETE. PROCEEDING WITH GSE FDS PURGE.	
-10100		04-020	MLFC	MTPE	VACUUM PERIOD AND S/C TK DEW POINT SAMPLING COMPLETE. F/C GSE LINES PURGE AND SAMPLING COMPLETE. PROCEEDING WITH F/C PRESSURIZATION. HAVE SPAD RECONFIGURE FLY-A-WAY VENT LINES.	
		04-021	MTPE	SPAD	RECONFIGURE FLY-A-WAY PER T/S 8.2.2.3.2 REPORT COMPLETION.	------ NR QC ------- NASA QC
-10000		04-022	MTPE	MREC SLMP MNQC	PROCEED WITH OPERATIONAL AND REDUNDANCY INSTRUMENTATION TEST PER SEQ 01 V2.	
		04-023	CVTS	MSTC	SA-9 WILL BE PRESSURIZED FOR 15 MIN BETWEEN T-99 45 AND T-98 15. CLEARING WILL BE COORDINATED BY SWING ARM PERSONNEL LOCALLY.	
		04-024	MTPE	SPAD	COORDINATE WITH SWING ARM PERSONNEL REGARDING SA9 AND SA8 CLEARING.	
-99 30		04-025	CLTC	MSTC	SA-8 WILL BE PRESSURIZED FOR 30 MINUTES BETWEEN T-99 15 AND T-98 15. CLEARING WILL BE COORDINATED BY SWING ARM PERSONNEL LOCALLY.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-99 15		04-026	MTPE	SCDR SCMP SLMP	PERFORM FOLLOWING.. OBTAIN (3 EA) GSE CWG ADAPTERS AND ASTRO HEADSETS FROM SPAD. CONNECT TRAINING ASTRO HEADSETS (3 EA) TO CWG ADAPTER CABLE (P1). CONNECT CWG ADAPTER CABLE (J2) TO (3 EA) UMBILICAL CONTROL HEAD CONNECTOR (P1). NR QC NASA QC *1	
		04-027	MTPE	SCDR SCMP	TEMPORARILY LAY ASIDE ASTRO HEADSETS	
		04-028	MTPE	SLMP	PANEL 6 POWER SW - AUDIO/TONE INTERCOM SW - T/R SUIT PWR SW - ON PAD COM SW - T/R	
		04-029	MTPE	CSTO	PUT CH 213 ON UMBILICAL	*1
		04-030	MTPE	SLMP	DON ASTRO HEADSET TO PROVIDE VOICE TRACK FOR DSE RECORD.	
-99 00		04-031	MLFC	MTPE	F/C PRESSURIZATION COMPLETE. PROCEEDING WITH GSE POWER DOWN. ECS IS BEING SUPPLIED WITH G02.	
					DELETED	*1
		04-032	MREC	MTPE	OPERATIONAL AND REDUNDANCY TESTS COMPLETE.	
		04-032A	MSTC	CVTS	VERIFY S-BAND CLEARANCE FOR DSE RECORD.	*1
		04-033	MTPE	MREC	PROCEED WITH DSE RECORD.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
-98 30		04-034	MREC	MTPE	DSE HBR RECORDING COMPLETE. REQUEST PERMISSION TO CONFIGURE ACE AND SC FOR LOW BIT RATE RECORDING.	
		04-035	MTPE	ALL	STANDBY FOR MOMENTARY LOS AND BEGINNING OF LBR A/B DATA	
-98 00		04-036	MLFC	MTPE	GSE ELECTRICAL POWER DOWN COMPLETE. ALL PERSONNEL EXCEPT SOMD ARE ON CH 222. SOMD IS SUPPORTING ECS.	
		04-037	MTPE	SEHZ	SWITCH TO NORMAL CHANNEL	
		04-038	MTPE	CVTS	CLEAR TO SECURE HAZARD MONITOR SYSTEM	
		04-039	MTPE	SCDR	PANEL 326 02 REPRESS PKG VLV - FILL 02 SM SUPPLY VLV (4.26B) - ON 02 SURGE TK VLV (4.26A) - ON PANEL 380 02 DEMAND REG VLV (4.16C) - OFF	
-97 30		04-040	MREC	MTPE	DSE LBR RECORD COMPLETE. RETURNING PCM TO NORMAL BIT RATE. STAND BY FOR MOM. LOS.	
		04-041	MSTC	CVTS	1. CSM PYRO BUSSES WILL BE ARMED. 2. VERIFY CLEARANCE FOR CSM RF.. A. S-BAND B. VHF-AM C. X-BAND 3. CSM DECODER WILL BE COMING ON. 4. GMIL SUPPORT REQUIRED ON CH 214. 5. REQUEST Q-BALL HEATER PWR ON.	
		04-042	MTPE	SLMP	PANEL 250 PYRO A SEQ A CB - CLOSE PYRO B SEQ B CB - CLOSE	250C016 250C017

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARK
		04-043	MTPE	SCDR	PANEL 8		
					SECS		
					ARM A CB - CLOSE	008C001	
					ARM B CB - CLOSE	008C002	
					LOGIC A CB - CLOSE	008C003	
					LOGIC B CB - CLOSE	008C004	
					RCS LOGIC		
					MNA CB - CLOSE	008C043	
					MNB CB - CLOSE	008C044	
					SECS		
					LOGIC 1 SW - (ON-UP)	008S011	
					LOGIC 2 SW - (ON-UP)	008S015	
				MSEQ	LOGIC BUS ARMED LITE ON	CD0089	
					LOGIC BUS SAFE LITE OFF	CD0088	
		04-044	MTPE	SCMP	PANEL 2		
					RCS CMD SW - OFF, REL	002S043	
					RCS TRANFR SW - SM, REL	002S044	
		04-045	MTPE	MSEQ	GSE SM RCS RESET A+B - ON	KR9422	R080
			MSEQ		RCS ENABLE A+B LITES OFF	CD0170	
						CD0171	
					ELS SAFE LITES (8) ON	CE0310	
						THRU	
						CE0317	
					MESC SYS A SAFE LITE ON	CD0084	
					MESC SYS B SAFE LITE ON	CD0085	
					RCS CONTROL SAFE LITE ON	CD0270	
					SMJC A+B SAFE LITES ON	SD0352	
						SD0353	
		04-046	MTPE	SCDR	PANEL 8		
					SECS		
					PYRO ARM A SW - (ON-UP)	008S010	
					PYRO ARM B SW - (ON-UP)	008S014	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		04-046	MSEQ		PYRO BUS ARM LITE ON	CD0219	
					LOGIC BUS A _____ VDC (P1-21)	CD0200	27.0 TO 38.0 VDC
					LOGIC BUS B _____ VDC (P1-21)	CD0201	27.0 TO 38.0 VDC
					PYRO BUS A _____ VDC (P1-22)	CD0005	33.0 TO 39.0 VDC
					PYRO BUS B _____ VDC (P1-22)	CD0006	33.0 TO 39.0 VDC
		04-047	MTPE	SCDR SCMP SLMP	PANEL 9, 10, 6 MODE SW - PTT POWER SW - AUDIO/TONE PAD COMM SW - T/R VHF AM SW - T/R AUDIO CONT SW - NORM SUIT PWR SW - ON S-BAND SW - T/R VOX SENS TW - 5 MASTER VOL TW - 5 PAD COMM VOL TW - 5 VHF-AM VOL TW - 5 S-BAND VOL TW - 5 INTER COM SW - T/R INTER COM TW - 5		
		04-048	MTPE	CSTO	PUT CSM STC ON UMBILICAL.		
		04-049	MTPE	SCDR SCMP	DOFF FACILITY HEADSETS AND DON TRAINING ASTRO HEADSETS.		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARK
		04-050	MTPE	SCDR SCMP SLMP	SEQUENTIALLY ESTABLISH TWO-WAY VOICE VIA UMBILICAL. ADJUST PAD COM VOLUME AS REQD. VERIFY SIDE TONE AND RECEPTION OF OTHER CREWMAN. SCDR - - - - - GO/NO GO RECORD TW ---------- SLMP - - - - - GO/NO GO RECORD TW ---------- SLMP - - - - - GO/NO GO RECORD TW ---------- MCSE - - - - - GO/NO GO	
		04-051	MTPE	SCDR SCMP	RETURN TO OIS HEADSETS. REPORT COMPLETION.	
		04-052	MTPE	SCDR	PANEL 9 PWR SW - OFF SUIT PWR SW - OFF	
		04-053	MTPE	SCMP	PANEL 10 PWR SW - OFF SUIT PWR SW - OFF	
		04-054	MTPE	CSTO	PUT CH 214 ON UMBILICAL	
		04-055	MTPE	SCDR SCMP	DISCONNECT TRAINING ASTRO HEADSETS AND GIVE TO SPAD.	

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NR QC NASA QC

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		04-056	MTPE	MCSE SLMP MNQC	1. PROCEED WITH SYSTEM TEST PER SEQUENCE 03 V2. 2. USE CH 214 FOR COORDINATION NOTE MCSE, MUDL, MCRF, MOLC, GMIL, SLMP TO CH 214.	
		04-057	MTPE		GIVE STATUS FOR STRAY VOLTAGE CKS.. MGNS ----- MECS ----- MSCS ----- MCSE ----- NOTE ROTATING DEVICES OPERATING	
		04-058	MTPE	SPAD	NOTIFY PYRO CREW TO START POWER ON STRAY VOLTAGE CHECKS PER TCP-K-4617 PARA. 6.0. NOTE MASTER ALARM AND MOMENTARY LOS MAY OCCUR AT CMC ACTIVATION. NOTE VERIFY DSE LOW BIT RATE RECORDING COMPLETE AND PCM IN HIGH BIT RATE BEFORE PROCEEDING WITH G AND N ACT.	
		04-059	MTPE	MGNS MGNL MGNR SCMP	PROCEED WITH STANDBY POWER TURN ON PER SEQ 09 V2 ON CH 215.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARK
		04-060	MTPE	MECS MNQC	PROCEED WITH ECS VERIFICATION TEST PER SEQ 05 V2.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
-97 00		04-061	MTPE	MSCS SCDR MSCL MSCR MNQC	PROCEED WITH SCS ACTIVATION PER SEQ 07 V2 ON CH 225.	
-96 00		04-062	MSCS	MTPE	1. SCS ACTIVATION COMPLETE. 2. READY FOR G AND N/SCS INTERFACE TEST.	
-95 30		04-063	MECS	MTPE	ECS VERIFICATION TEST COMPLETE. STARTING SURGE TK/EMERG O2 PURGE.	
		04-064	MGNS	MTPE	1. STANDBY POWER TURN ON COMPLETE. 2. S/C LIGHTING NO LONGER REQUIRED. 3. PROCEEDING WITH OPERATE POWER ON TEST.	
-95 15		04-065	MGNS	MTPE	OPERATE POWER ON COMPLETE. PROCEEDING WITH G AND N OPERATIONAL.	
-95 00		04-066	MGNS	MTPE	G AND N OPERATIONAL TEST COMPLETE.	
		04-067	MTPE	MGNS MSCS	PERFORM G AND N/SCS INTERFACE TEST PER SEQ 10 V2 ON CH 225.	
		04-068	MTPE	MREC	PROCEED WITH DSE PLAYBACK PER SEQ 01 V2	
		04-069	MTPE	SPAD	PERFORM ACCESS DOOR STATUS CHECK.	

NOTE

THE FOLLOWING REPRESENTS A SUMMATION OF ACCESS DOOR STATUS. ''ON'' MEANS FLIGHT DOOR INSTALLED WITH MOUNTING. ''OFF'' INDICATES DOOR IS OFF FOR REQUIRED ACCESS, CABLE PENETRATION, HOSE PENETRATIONS, ETC. WHEN CABLE AND HOSES ARE CONNECTED THE AREA IS PROTECTED WITH PLASTIC TO MINIMIZE PROBLEMS DUE TO LEAKS OR SPILLS.

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARK
		04-069				

COMMAND MODULE	DESIRED	ACTUAL
CM2	ON	
CM8	OFF	
CM10	OFF	
CM11	OFF	
CM13	OFF	
CM14	OFF	
CM15	OFF	
CM17	ON	
CM19	ON	
CM23	OFF	
CM24	OFF	
COMMAND SERVICE MODULE FAIRINGS		
CSM1	OFF	
CSM2	ON	
CSM3	ON	
CSM4	OFF	
CSM5	OFF	
CSM6	OFF	
CSM7	OFF	
CSM8	OFF	
CSM9	OFF	
A34-388 (CSM 10)	OFF	
CSM11	ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		04-069			SERVICE MODULE	
					SM1 ON	------
					SM2 ON	------
					SM3 OFF	------
					SM4 OFF	------
					SM5 OFF	------
					SM6 OFF	------
					SM7 OFF	------
					SM8 (4 EA) (LOWER) OFF	------
					SM8 (4 EA) (UPPER) ON	------
					SM9 (2 EA) ON	------
					SM10 (6 EA) ON	------
					SM11 OFF	------
					SM12 OFF	------
					SM13 OFF	------
					SLA	
					C1 ON	------
					C2 ON	------
					C3 ON	------
					C4 ON	------
					D1 OFF	------
					D2 OFF	------
					D3 OFF	------

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARK
		04-069			D4	OFF	
					D5	OFF	
					D6	OFF	
					D7	OFF	
					D8	OFF	
					D9	OFF	
					D10	OFF	
					D11	OFF	
					D12	OFF	
					D13	OFF	
					D14	OFF	
					D15	ON	
					D16	ON	
					+YII	OFF	
					-ZI	OFF	
					+ZIII	OFF	
					-YIV	OFF	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
-94 45		04-070	MSCS	MTPE	G AND N/SCS INTERFACE TEST COMPLETE.		
-94 30		04-070A	MTPE	MCSE	VERIFY COMMIN CONFIGURATION SO THAT BIO-MED CHECKS MAY PROCEED		*1
		04-070B	MTPE	SLMP	PANEL 6 SUIT POWER-OFF PWR SW-OFF		*1
		04-071	MTPE	SPAD	1. PROCEED WITH TEST SETUP 8.2.2.1.1 A THRU C. (BIO-MED PHSIO SIM. SETUPS)		
						NR QC ------	NASA QC ------
		04-072			DELETED		*1
		04-073	MTPE	SCDR	PANEL 9		
					SUIT PWR SW - (ON-UP)	0095007	
		04-074	MTPE	SBST	BIO-MED SIMULATOR		
					SW S5 - CDR ON PWR SW S3 - ON PRESS SW S4 TO TEST READ METER M-1 VDC -----		16.8+6 *1 -2
		04-075	MBSE		ECG CDR ZPN CDR	CJ0060 CJ0200	
		04-076	MTPE	SCMP	PANEL 10		
					SUIT PWR SW - (ON-UP)		
		04-077	MTPE	SBST	BIO-MED SIMULATOR		
					SW S5 - CMP PWR SW S4 TO TEST READ METER M1 VDC -----		16.8+6 *1 -2
		04-078	MBSE		ECG CMP ZPN CMP	CJ0061 CJ0201	
		04-079	MTPE	SLMP	PANEL 6		
					SUIT PWR SW - (ON-UP)		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		04-080	MTPE	SBST	BIO-MED SIMULATOR		
					SW S5 - LMP		
					PRESS SW S4 TO TEST		
					READ METER M1 VDC		16.8+6 *1
					-----		-2
		04-081	MBSE		ECG LMP	CJ0062	
					ZPN LMP	CJ0202	
		04-082	MTPE	SBST	BIO-MED SIMULATOR		
					SW S5 - ALL THREE CREWMEN		
		04-083	MBSE		ECG CDR	CJ0060	
					ECG CMP	CJ0061	
					ECG LMP	CJ0062	
					ZPN CDR	CJ0200	
					ZPN CMP	CJ0201	
					ZPN LMP	CJ0202	
		04-084	MTPE	CBSE	VERIFY BIO-MED PARAMETERS IN LCC		
					ECG CDR	CJ0060	
					ECG CMP	CJ0061	
					ECG LMP	CJ0062	
					ZPN CDR	CJ0200	
		04-085	MTPE	SCET	BIO-MED SIMULATOR		
					PWR SW S3 - OFF		
					SW S5 - OFF		
		04-086	MTPE	SCDR	PANEL 9		
					SUIT PWR SW - OFF	009S007	
		04-087	MTPE	SLMP	PANEL 6		
					SUIT PWR SW - OFF	006S007	
		04-088	MTPE	SCMP	PANEL 10		
					SUIT PWR SW - OFF	010S007	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		04-089	MTPE	SCMP	DISCONNECT 3 EA EXTENSION CABLES SCA105033C FROM CREWMAN COMM CONTROL HEAD BY POSITIONING LOCK TO UNLOCK AND DEMATE CONNECTORS. REMOVE CABLES FROM S/C.	------ NR QC ------- NASA QC	
		04-090	MREC	MTPE	DSE PLAYBACK COMPLETE.		*1
-94 00		04-090A	MCSE	MTPE	VERIFY FEC READY FOR ACS CHECKS. HAVE JROL CONTACT MCSE ON CH 214.		
		04-091	MTPE	SPAD	1. PROCEED WITH TEST SET-UP 8.2.2.1.1 D. (BIO-MED PHYSIO SIM DISC).		
					2. REPORT COMPLETION	------ NR QC ------- NASA QC	
-93 30		04-092	MTPE	SPAD	VERIFY POWER ON STRAY VOLTAGE CHECKS COMPLETE.	------ NR QC ------- NASA QC	
		04-093	MTPE	SCDR	PANEL 8		
					SECS		
					PYRO ARM A SW - SAFE	008S010	
					PYRO ARM B SW - SAFE	008S014	
			MSEQ		PYRO BUS SAFE LITE ON	CD0218	
					PYRO BUS ARM LITE OFF	CD0219	
					PYRO BUS A VDC (P1-22)	CD0005	0 +/- 0.5
					PYRO BUS B VDC (P1-22)	CD0006	0 +/- 0.5
		04-094	MTPE	SCDR	PANEL 8		
					SECS		
					LOGIC 1 SW - OFF	008S011	
					LOGIC 2 SW - OFF	008S015	
			MSEQ		LOGIC BUS ARMED LITE OFF	CD0089	
					LOGIC BUS SAFE LITE ON	CD0088	
					LOGIC BUS A VDC (P1-21)	CD0200	0 VDC +/-0.5
					LOGIC BUS B VDC (P1-21)	CD0201	0 VDC +/-0.5
		04-094A	MCSE	MTPE	FEC ACS CHECKS ARE COMPLETE.		*1
		04-095	MTPE	SLMP	RETURN TO OIS HEADSET.		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		04-096	MTPE	SLMP	PANEL 3 S-BAND AUX TV SW - OFF TAPE SW - OFF S-BAND NORM PWR AMPL HI SW - CTR XPNDR SW - OFF UP TLM CMD SW - OFF POWER PMP SW - OFF VHF AM A SW - OFF B SW - OFF VHF BCN SW - OFF	
		04-097	MTPE	SLMP	PANEL 6 PWR SW - OFF SUIT PWR SW - OFF	
		04-098	MTPE	SPAD SCDR	INSTALL PYRO ARM SW GUARD ON PANEL 8. NR QC NASA QC	
		04-099	MTPE	SPAD	RETAIN PYRO ARM SW GUARD KEY	
-93 30		04-100	MSTC	CVTS	1. PYRO ARM SW GUARD IS INSTALLED. 2. CSM PYRO BUSSES ARE SAFE 3. CSM RF IS OFF 4. CSM CMD DECODER IS OFF 5. GMIL SUPPORT NO LONGER REQUIRED. 6. Q-BALL HEATER POWER NO LONGER REQUIRED.	
		04-101	MTPE	SPAD	DISCONNECT VHF AND S-BAND ANT COUPLER PER T/S 8.2.2.2.1. REPORT COMPLETION. NR QC NASA QC	*1
		04-102	MTPE	MGNS	PROCEED WITH G AND N DEACTIVATION PER SEQ 09 V2 ON CH 215. REPORT COMPLETION.	
		04-103	MTPS	MSCS	PROCEED WITH SCS DEACTIVATION PER SEQ 07 V2.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		04-104	MGNS	MTPE	G AND N DEACTIVATION COMPLETED	
		04-105	MSCS	MTPE	SCS POWER DOWN COMPLETED	
		04-106	MECS	MTPE	SURGE TK/EMERG 02/SUIT LOOP PURGE IS COMPLETE.	
		04-107	MTPE	ALL	VERIFY READY TO POWER DOWN SC	
		04-108	MTPE	SLMP	PANEL 4 ECS GLYCOL PUMPS SEL - OFF TIME ----------	
		04-109	MTPE	MEPS	PROCEED WITH SC POWER DOWN	
		04-110	MEPS	ALL	STANDBY FOR MOMENTARY LOS	
		04-111	MEPS	MACE	GO TO INTERNAL TIMING. DISABLE CM A/B DATA. R112 - 1010 VERIFY SYNC	
		04-112	MEPS	SCMP	PANEL 2 STATUS C/W LITES CW PWR SW - OFF (CTR)	
		04-113	MEPS	SLMP	PANEL 5 C/W MNA CB - OPEN C/W MNB CB - OPEN	005C052 005C053
		04-114	MEPS	SLMP	PANEL 4 TELCOM GRP 1 SW - OFF GRP 2 SW - OFF PANEL 5 INST ESS MNA CB - OPEN ESS MNB CB - OPEN	 004S004 004S005 005C019 005C020
			MSEQ		ELS SAFE LITES (8) - OFF	CE0310 THRU CE0317

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARK
		04-114			PANEL 3	
					PWR SCE SW - OFF	003S052
					INV 2 AC BUS 2 SW - OFF	003S065
					INV 1 AC BUS 1 SW - OFF	003S060
					INV 2 SW - OFF	003S058
					INV 1 SW - OFF	003S057
				MEPS	HRS ----- MIN ----- SEC -----	
		04-115	MEPS	SLMP	VERIFY AC BUS 1 AND 2 90 VAC MAX	
		04-116	MEPS	SCMP	PANEL 225	
					CTE MN A CB - OPEN	225C021
					CTE MN B CB - OPEN	225C022
		04-117	MEPS	UFET	C14-205 CB6 - OPEN	
				UFET	CB6 LITE OFF	
					NOTE REMOVE BAT ENABLES, IF ENTERED	
			MEPS		PS A REMOTE SENSE - OFF	KC7738 R089
					PS B REMOTE SENSE - OFF	KC7739 R090
					MTR SW PS ----- VDC (P2-21)	GC5030 39+/-1
		04-118	MEPS	MEPE	SM MOTOR SW CLOSE - OFF	KC7636 R102
			MEPE		MTR SW OPEN LITE ON	SC2410
		04-119	MEPS	SLMP	PANEL 3	
					VERIFY MN BUS A AND MN BUS B 20 VDC MAX	
		04-120	MEPS	MEPE	PS A TO BUS A - OFF	KC7024 R100
					PS B TO BUS B - OFF	KC7034 R101
				UFET	C14-205 CB 8 THRU 15 LITES OUT	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		04-121	MEPS	SCMP	PANEL 250		
					PYRO A SEQ A CB - OPEN	250C016	
					PYRO B SEQ B CB - OPEN	250C017	
					BAT A PWR ENTRY AND PL CB - OPEN	250C020	
					BAT B PWR ENTRY AND PL CB - OPEN	250C021	
					BAT C PWR ENTRY AND PL CB - OPEN	250C022	
					BAT C BAT CHGR AND EDS 2 CB - OPEN	250C023	
		04-122	MEPS	MSEQ	MESC INDICATE PWR - OFF	KD7021	R084
			MSEQ		SMJC A SAFE LITE OFF	SD0352	
					SMJC B SAFE LITE OFF	SD0353	
					LOGIC BUS SAFE LITE OFF	CD0088	
					PYRO BUS SAFE LITE OFF	CD0218	
					MESC SYS A SAFE LITE OFF	CD0084	
					MESC SYS B SAFE LITE OFF	CD0085	
		04-123	MEPS	SLMP	PANEL 3		
					VERIFY ALL DC INDICATOR POSITIONS INDICATE 20 VDC MAX		
		04-124	MEPS	SSET	S14A1		
					CB 9 - OPEN		
					CB 10 - OPEN		
		04-125	MEPS	MTPE	SC POWER DOWN COMPLETE		
		04-126	MTPE	ALL	PROCEED WITH GSE POWER DOWN		
		04-127	MTPE	MECS	POWER DOWN ECS GSE PER SEQ 05 V2		
		04-128	MECS	MTPE	ECS GSE IS POWERED DOWN		
		04-129	MTPE	MEPS	POWER DOWN GSE POWER DISTRIBUTION		
		04-130	MEPS	MEPE	BUS A FLTR ON/OFF - OFF	KC7768	R075
			MEPE		GR PWR FLTR BANK A ON LITE OFF	GC5075	
		04-131	MEPS	MEPE	BUS B FLTR ON/OFF - OFF	KC7769	R075
			MEPE		GR PWR FLTR BANK B ON LITE OFF	GC5076	
		04-132	MEPS	MEPE	PS B DC ON (R101) - OFF	KC7702	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARK
		04-132					
				MEPS	GSE BUS PS B IS 0+2-0 (P1-11) PS B OUTPUT ON LITE OFF	GC5128	10C05
				LPDS	C14-626 P/S 4 DC OUTPUT POWER LITE OFF		
		04-133	MEPS	MEPE	PS B AC START (R101) - OFF	KC7032	
				MEPE	GSE PS B IS 0+2-0 (P1-3)	GC5028	
				LPDS	C14-626 PS 4 AC INPUT POWER ON LITE OFF		
		04-134	MEPS	MEPE	PS A DC ON (R100) - OFF	KC7698	
				MEPE	GSE BUS PS A IS 0+2-1 (P1-11) PS A OUTPUT ON LITE OFF	GC5132 GC5124	10C02
				LPDS	C14-626 PS 3 DC OUTPUT POWER ON LITE OFF		
		04-135	MEPS	MEPE	PS A AC START (R100) - OFF	KC7022	
				MEPE	GND PS VOLTS BUS A IS 0+2-0 (P1-3)	GC5024	
				LPDS	C14-626 PS 3 AC INPUT POWER ON LITE OFF		
-93 00		04-136	MSTC	CVTS	1. CLEAR CONTROL AREA FOR SC ORDNANCE OPERATIONS.		
					2. SC IS POWERED DOWN		
					3. PATCH OTV CAMERA 54 TO SWITCHING MONITOR 51. PATCH CAMERA 26 TO SWITCHING MONITOR 52.		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		04-137	MTPE	SPAD	1. START CLEARING NON-ESSENTIAL PERSONNEL FOR ORDNANCE HOOK-UP 2. CLEAR FROM S/A 7, 8, 9, AND MSS LEVELS 3, 4 AND 5 EXCEPT FOR ESSENTIAL PERSONNEL. NOTE ESSENTIAL SC PERSONNEL ARE.. NR: SPAD (1); TECHNICIAN (6); TECH. SUPVR. (1); QC (4); ENG. (2); SAFETY (1) NASA: QC (3); ENG. (2); PVSS SUPPORT: TECHNICOLOR (1) 320 FT LEVEL: BATC SMDPS VALVE OPER.	
-92 30		04-138	MSTC	CVTS	VERIFY CLEARANCE TO BEGIN ORDNANCE INSTALLATION AND HOOK UP. VERIFY RF SILENCE ON UNTIL T-81 30.	
		04-139	MTPE	SPAD	1. PROCEED WITH ORDNANCE OPERATIONS PER TCP-K-4617 PARA 7.0 AND 8.0. 2. PERFORM T/S 8.2.3.1.1 THRU 8.2.3.1.9 AS DIRECTED FOR SUPPORT OF TCP-K-4617. REPORT COMPLETION. ------ NR QC ------- NASA QC NOTE FOR REMAINDER OF TEST, ITEMS INDICATED AS (L/V) OR (SUPPORT) MAY NOT BE VERIFIED OVER INTERCOM. FUNCTIONS ARE PROVIDED FOR INFO ONLY AND DO NOT REQUIRE QC VERIFICATION.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARK
-85 00		04-140	MSTC	CVTS	1. CLEAR CONTROL AREA FOR HYPER LINE DISCONNECT.	
					2. VERIFY CPSS CLEARANCE TO BEGIN SCAPE OPERATION.	
		04-141	MTPE		NOTIFY FUEL AND OXIDIZER SCAPE AND SPLASH CREWS TO REPORT ON STATION.	

NOTE

CONTROL AREA IS A 50 FT RADIUS CIRCLE AROUND FUEL AND OXIDIZER OPERATIONAL DISCONNECT TOWERS.

WARNING

INGRESS/EGRESS TO LV/SC WILL BE UPWIND FROM SCAPE OPERATION.

NOTE

HYPERGOLIC DISCONNECT CREWS..

SCAPE SUIT OPERATIONS

STUB TWR

NOTE

SPLASH MAY BE USED TO REMOVE EVERY OTHER BOLT FROM FLANGE.

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		04-141			FUEL ---- OXID ---- PFTR '2' POTR '2' PNQC '1' PNQC '1' ROVING 'AS REQUIRED' ------ PVSS SNRS SSPS	
		04-142	MTPE	MSPS	PROCEED WITH HYPERGOLIC LINE DISCONNECT PER SEQ. 12, V2.	
-81 30		04-143	MTPE	SPAD	VERIFY PYRO OPERATIONS COMPLETE	
		04-144	MTPE	SNQC	REPORT VERIFICATION OF PYRO H/U.------ ------- NR QC NASA QC	
		04-145	MSTC	CVTS	1. CSM INITIAL PYRO WORK COMPLETE 2. STARTING HEAVY ORDNANCE SIMULATION. 3. RF SILENCE NO LONGER REQUIRED.	
		04-146	CVTS	MSTC	LEVEL 4A, 4C AND 5 ARE OPEN FOR NORMAL WORK.	*1
		04-147	MTPE	SPAD SNQC	PROCEED WITH HEAVY ORDNANCE SIMULATION PER TCP-K-4617, PARA 4.0.	
		04-148	MSPS	MTPE	HYPERGOLIC LINE DISCONNECT COMPLETE. ------ ------- NR QC NASA QC	
		04-149	MSTC	CVTS	HYPER DISCONNECT COMPLETE.	
-80 30		04-149A	CVTS	MSTC	CONTROL AREA OPEN FOR NORMAL WORK. RF SILENCE IS OFF.	*1
-78 00		05-150	SPAD	MTPE	HEAVY ORDNANCE SIMULATION COMPLETE.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		04-151	MTPE	SNQC	REPORT VERIFICATION OF VARIABLE RESISTOR H/U COMPL. ------ NR QC ------- NASA QC	
		04-152	MTPE	BOTV	PATCH CAMERA 25 TO MONITOR 1A.	
		04-153	MTPE	SPAD	1. PROCEED WITH BRIDGE SET-UP FOR REMOTE RESISTANCE CKS PER K-4617, PARA 4.2. 2. HAVE PYRO PERSONNEL VERIFY TV SET UP FOR REMOTE RESISTANCE CHECKS. 3. REPORT IN PRIOR TO CLEARING FOR REMOTE RESISTANCE CHECKS	
		04-154	SPAD	MTPE	1. BRIDGE SETUP COMPLETE. 2. READY FOR REMOTE RESIS CKS.	
		04-155	MTPE	SNQC	REPORT VERIFICATION OF BRIDGE SETUP COMPLETION. ------ NR QC ------- NASA QC	
		04-156	MTPE	SPAD	1. CLEAR WITH PYRO PERSONNEL TO COMP. 1A FOR REMOTE RESISTANCE CHECKS. 2. REPORT ARRIVAL	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		04-157	MTPE	SPAD	PROCEED WITH REMOTE RESISTANCE CHECKS PER TCP-K-4617, PARA 4.3.5 THRU 4.3.9. REPORT COMPLETION	
					NOTE WAIT FOR COMPLETION	
		04-158	SPAD	MTPE	REMOTE RESIS. CHECKS COMPLETE	
		04-159	MTPE	SNQC	REPORT VERIF. OF REMOTE RESIS. CHECKS COMPLETION.	NR QC / NASA QC
-77	30	04-160	MSTC	CVTS	CSM PYRO SIMULATION COMPLETE.	
		04-161			(DELETED)	*1
		04-162	MTPE	SPAD	PROCEED WITH THE FOLLOWING T/S... A. 8.2.4.2.1 THRU 8.2.4.2.5 B. 8.2.4.3.1 THRU 8.2.4.3.13. C. 8.2.4.4.1 THRU 8.2.4.4.9. D. 8.2.4.5.1 THRU 8.2.4.5.8. E. 8.2.4.6.2 F. 8.22.1 NOTE CSM MECHANICAL OPERATIONS CONTINUE UNTIL T-41 00. CSM POWER WILL BE COMING ON AT T 60 30	*1 *1
		04-162A	MTPE	MECS	PERFORM SUIT WICK SERVICING PER SEQ 05 V2.	*1
-64	30 112	04-163	MTPE	CTSC	VERIFY LH2 DEWAR TOPOFF AND SAMPLING STARTED.	
		04-164			(DELETED)	
		04-165			(DELETED)	
		04-166			(DELETED)	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		05-000			CALL TO STATIONS ----------	
					SERVICING OPERATIONS ----------	
					NOTE 1. GSE POWER IS ON. 2. ACE UPLINK AND DOWNLINK ARE ON.	
					NOTE TEST SETUPS CONTAINED IN SECT 8.1.2	
-61 30		05-001	MSTC	ALL	1. ALL STATIONS REPORT VERIFICATION OF SETUPS ON ASSIGNED CHANNELS. 2. DO NOT REMOVE R START FUNCTIONS	
		05-002	MTPE		RECORD SETUP VERIFICATION REPORTS..	
					MACE ---------- REPORTS FOR ACE RACE	
					MSCS ---------- REPORTS FOR MSCL MSCR	
					MECS ---------- REPORTS FOR MECE UWGR UGCU UGTR	
					MLFC ---------- REPORTS FOR MHFC SLFC	
					MEPS ---------- REPORTS FOR MEPE LPDS MSEQ SPDS SSET	
					MSPS ---------- REPORTS FOR MSPE PFRS PORS	
					MRCS ---------- REPORTS FOR MRCE SHTR SHVB SHCU	
					MREC ---------- REPORTS FOR MQLD MPUG	
					MGNS ---------- REPORTS FOR MGNL MGNR	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		05-002			MCSE ----------	
					CSAT ----------	
					MNQC ----------	
					MGQC ----------	
					SGQC ----------	
					SNQC ----------	
					SPAD REPORTS FOR ----------LFET SFET UFET LMDR	
		05-003	MSTC	MNQC MGQC	REPORT CONSTRAINTS LIST STATUS. ----- NR QC	------- NASA QC
		05-003A	MECS	MTPE	SUIT WICK SERV COMPLETE	*1
		05-004	MSTC	CVTS	POWER WILL BE APPLIED TO THE CSM IN 30 MINUTES.	
-61	05	05-005	CVTS	MSTC	Q-BALL POWER COMING ON IN 5 MINUTES.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
-61 00		06-000			GSE POWER UP - SERVICING OPERATIONS	
		06-001	CVTS	MSTC	SMDPS WILL BE IN 1 SW/1 VLV MODE FOR 2 HR.30 MIN.	
		06-002	MTPE	MEPS	PROCEED WITH GSE POWER VERIFICATION.	
		06-003			(DELETED)	
		06-004	MEPS	CSGS	VERIFY.. 1. ML ACE PS BATT ENABLE ACTIVATED LITE ON 2. ML ACE BATT ON LITE OFF 3. ML CSM ACE (BUS B ACTIVATED LITE ON) 4. MSS ACE PS BATT ENABLE ACTIVATED LITE ON 5. MSS ACE BATT ON LITE OFF 6. MSS ACE BUS ACTIVATED LITE ON	
		06-005	MEPS	LFET	C14-240 VERIFY.. 1. AC PWR LITE ON 2. -12 VDC PWR LITE ON 3. +6 VDC PWR LITE ON 4. +12 VDC PWR LITE ON 5. +28 VDC PWR LITE ON C14-346 VERIFY.. C14-261 LITE (THRU WINDOW) C14-484 VERIFY.. 1. AM-1 LITE ON 2. AM-2 LITE ON 3. EM-1 LITE ON	
		06-006	MEPS	LPDS	C14-621 (UNITS 4 THRU 9) VERIFY.. 1. 115 VAC LITE ON 2. 208 VAC LITE ON 3. REMOTE LOCAL SW - REMOTE C14-624 VERIFY.. CB-1 - CLOSED C14-626 PS 2 VERIFY.. 1. AC INPUT POWER ON LITE ON 2. DC OUTPUT POWER ON LITE ON C14-626 PS 8 VERIFY.. 1. AC INPUT POWER ON LITE ON 2. DC OUTPUT POWER ON LITE ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
					C14-628 PS 2 VERIFY.. BATTERY ON LITE ON C14-628 PS 8 VERIFY.. BATTERY ON LITE ON C14-481 DC LOGIC A+B ON LITES ON AC POWER ON LITE ON BLOWER OPERATION HEAT SINK NO. 1 FAN OFF LITE OFF HEAT SINK NO. 2 FAN OFF LITE OFF VERIFY PS CONT REMOTE LITES - ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		06-007	MEPS	UFET	C14-232 VERIFY.. 1. MODE LOCAL/REMOTE SW REMOTE 2. DC POWER ON/OFF SW - ON 3. ELAPSED TIME METER RUNNING C14-267 VERIFY.. 1. EDTCS NO. 1 PWR LITE ON 2. EDTCS NO. 2 PWR LITE ON C14-205 VERIFY.. CB2 AND CB19 LITES ON	
		06-008	MEPS	SFET	C14-240 VERIFY.. 1. AC PWR LITE ON 2. -12 VDC PWR LITE ON 3. +6 VDC PWR LITE ON 4. +12 VDC PWR LITE ON 5. +28 VDC PWR LITE ON C14-268 VERIFY.. 1. AC PWR LITE ON 2. DC PWR LITE ON C14-590 VERIFY.. 1. PANEL PWR SW ON 2. MAIN PWR CB1 ON 3. JB5 AND 6 ON C14-484.. VERIFY AC LITE ON VERIFY AM-1 LITE ON	
		06-009	MEPS	SPDS	C14-621 (UNITS 10, 11, 12, 13) VERIFY.. 1. 115 VAC LITE ON 2. 208 VAC LITE ON 3. REMOTE LOCAL SW - REMOTE C14-626 PS1 AND PS5 VERIFY.. 1. AC INPUT POWER ON LITE ON 2. DC OUTPUT POWER ON LITE ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		06-009			C14-628 PS1 AND PS5 VERIFY..		
					BATTERY ON LITE ON		
					C14-628 (PS1)		
					FEEDER BUS B ON LITE ON		
			MEPE		P/S 1 OUTPUT LITE ON	GC5138	10C22
					P/S 1 BAT ENABLE LITE ON	GC5140	
					P/S 1 BAT ON LITE OFF	GC5139	
					P/S 1 OUTPUT VDC	GC5141	29+/-1
					GSE BUS P/S 1 VDC	GC5149	29+/-1
		06-010	MEPS	MEPE	VERIFY..		
					P/S 5 OUTPUT LITE ON	GC5143	10C25
					P/S 5 BAT ON LITE OFF	GC5144	
					P/S 5 OUTPUT VDC	GC5146	31+/-1
					GSE BUS P/S 5 VDC (P2-23)	GC5150	31+/-1
			MEPE		VERIFY..		
					P/S 5 GSE BUS B ON LITE ON	GC5147	10C28
					P/S 5 GSE BUS C ON LITE ON	GC5148	10C28
					P/S 5 BAT ENABLE LITE ON	GC5145	
			SPDS		C14-628 (PS5) (VERIFY)		
					FEEDER BUS B ON LITE ON		
					FEEDER BUS C ON LITE ON		
		06-011	MEPS	SFET	LDW410-11180-1 (LEM SW UNIT)		
					VERIFY..		
					+28 VDC FACILITY LITE ON		
					MODE CONCURRENT LITE ON		
		06-012	MEPS	SFET	C14-626 (PS 5)		
					CB1 (C BUS) - CLOSED		
		06-013	MEPS	MEPE	ADJUST PS A OUTPUT TO 30.0 VDC		C076
			MEPE		30 0000 1300 IS INSERTED		
		06-014	MEPS	MEPE	ADJUST PS B OUTPUT TO 30.0 VDC		C076
			MEPE		30 0000 2300 IS INSERTED		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		06-015	MEPS	MEPE	PS A AC START - ON	KC7022	R100
			LPDS		PS 3 AC INPUT PWR LITE ON		
					PS3 VDC -----		30 +/- 2
		06-016	MEPS	MEPE	PS A DC - ON PS A DC ON LITE ON	KC7628 GV0127	R100
			MEPS		PS A VDC (P1-3) -----	GC5024	30+/-2
			LPDS		PS 3 DC OUTPUT PWR ON LITE ON		A12A2
		06-017	MEPS	MEPE	PS B AC START - ON	KC7032	R101
			LPDS		PS 4 AC INPUT PWR ON LITE ON		
					PS 4 VDC -----		30+/-2
		06-018	MEPS	MEPE	PS B DC - ON PS B DC ON LITE ON	KC7632 GV0129	R101
			MEPS		GND PS B VDC (P1-3) -----	GC5028	30+/-2
			LPDS		PS 4 DC OUTPUT PWR ON LITE ON		A11A2
		06-019	MEPS	MEPE	BUS A FLTR ON/OFF - ON	KC7768	R075
			MEPE		GR PWR FLTR BANK A ON LITE ON	GC5075	
		06-020	MEPS	MEPE	BUS B FLTR ON/OFF - ON	KC7769	R075
			MEPE		GR PWR FLTR BANK B ON LITE ON	GC5076	
			LPDS		C14-481 SM MOTOR SW OPEN LITES A AND B ON.		
		06-021	MEPS	MTPE	GSE POWER UP IS COMPLETE.		
		06-022	MTPE	MECS	PROCEED WITH ECS GSE POWER UP AND SWITCH TO REMOTE PER SEQ 05, V2.		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-60 30		07-000			S/C BUS POWER UP - SERVICING OPERATION	
		07-000A	MTPE	CTSC	VERIFY LH2 DEWAR TOPOFF AND SAMPLING COMPLETE. PROCEEDING WITH LO2 DEWAR TOPOFF AND SAMPLING.	
		07-001	MTPE	MEPS	PWR UP SC BUSES	
		07-002	MEPS	MSEQ	MESC INDICATE PWR - ON	KD7021 R084
			MSEQ		SMJC A SAFE LITE ON	SD0352
					SMJC B SAFE LITE ON	SD0353
					LOGIC BUS SAFE LITE ON	CD0088
					PYRO BUS SAFE LITE ON	CD0218
					MESC SYS A SAFE LITE ON	CD0084
					MESC SYS B SAFE LITE ON	CD0085
		07-003	MEPS	SLMP	PANEL 3 - VERIFY NO DC VOLTAGE OR CURRENT INDICATIONS ON ALL POSITIONS.	
		07-004	MEPS	SCMP	PANEL 250	
					BAT A PWR ENTRY/PL CB - CLOSE	250C020
					BAT B PWR ENTRY/PL CB - CLOSE	250C021
					BAT C PWR ENTRY/PL CB - CLOSE	250C022
					BAT C BAT CHGR/EDS 2 CB - CLOSE	250C023
					PYRO A SEQ A CB - CLOSE	250C016
					PYRO B SEQ B CB - CLOSE	250C017
		07-005	MEPS	SLMP	PANEL 3 - READOUT DC INDICATIONS..	
					PYRO BAT A VDC	35.5+/- 2.5 VDC
					PYRO BAT B VDC	35.5+/- 2.5 VDC
					BAT BUS A VDC	35 +/- 2.5 VDC
					AMPS	ENG INFO
					BAT BUS B VDC	35 +/- 2.5 VDC
					AMPS	ENG INFO
					BAT C VDC	35 +/-
					AMPS	ENG INFO
					VERIFY 20 VDC MAX FOR ALL OTHER POSITIONS	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		07-005			PANEL 250	
					PYRO A SEQ A CB - OPEN	250C016
					PYRO B SEQ B CB - OPEN	250C017
		07-006	MEPS	SLMP	PANEL 3 FC1 MN BUS A TB-BP MN BUS B TB-BP FC2 MN BUS A TB-BP MN BUS B TB-BP FC3 MN BUS A TB-BP MN BUS B TB-BP	
		07-007	MEPS	MEPE	PS A TO BUS A - ON	KC7024 R100
			MEPE		SM MTR SW OPEN LITE ON	SC2410
		07-008	MEPS	MEPE	PS B TO BUS B - ON	KC7034 R101
			MEPE		SM MTR SW OPEN LITE ON	SC2410
		07-009	MEPS	UFET	C14-205 CB17 - CLOSE	
				UFET	CB2, 13, 15, 17, 19 LITES ON.	
			MEPE		GND PSA AMPS (P1-4) -----	GC5025 10 MAX
					GND PSB AMPS (P1-4) -----	GC5029 10 MAX
					SM MTR SW PS VDC (P2-21) -----	GC5030 39 +/- 1
		07-010	MEPS	MEPE	SM MOTOR SW CLOSE - ON	KC7636 R102
			MEPE		SM MTR SW OPEN LITE OFF	SC2410

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		07-011	MEPS	SLMP	PANEL 3	
					MN BUS A _____ VDC	29 +/- 2
					MN BUS B _____ VDC	29 +/- 2
		07-012	MEPS	MEPE	ADJUST MN BUS A TO 29.0 VDC	
		07-013	MEPS	MEPE	ADJUST MN BUS B TO 29.0 VOLTS	
		07-014	MEPS	SLMP	PANEL 3	
					MN BUS A RESET - RESET, REL 003S017	
					MN BUS B RESET - RESET, REL 003S026	
		07-015	MEPS	MTPE	DC PWR UP IS COMPLETE.	
		07-016	MTPE	SCMP	PANEL 225	
					CTE MNA CB - CLOSED 225C021 MNB CB - CLOSED 225C022	
		07-017	MTPE	MECS	VERIFY ECS GSE POWER UP IS COMPLETE AND COOLING IS OPERATIONAL	
		07-018	MTPE	MEPS	PROCEED WITH AC BUS PWR UP.	
		07-019	MEPS	SLMP	PANEL 3	
					INV 1 SW - MNA 003S057 INV 2 SW - MNB 003S058	
				MEPE	TIME HR _____ MIN _____ SEC _____	
				SLMP	PANEL 3 INV 1 AC BUS 1 SW - (ON-UP) 003S060	
					AC BUS 1 PH A _____ VAC	115 +/-5
					PH B _____ VAC	115 +/- 5
					PH C _____ VAC	115 +/- 5

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		07-019			INV 2 AC BUS 2 SW - ON (ON-UP) 003S065	
					AC BUS 2 PH A VAC -----	115 +/- 5
					PH B VAC -----	115 +/- 5
					PH C VAC -----	115 +/- 5
		07-020	MEPS	SLMP	PANEL 3	
					AC BUS 1 RESET SW - RESET, REL 003S063	
					AC BUS 2 RESET SW - RESET, REL 003S067	
		07-021	MEPS	SLMP	PANEL 5	
					C/W MNA CB-CLOSED 005S052 C/W MNB CB - CLOSED 005C053	
					TIME -----	
		07-022		SCMP	PANEL 2	
					C/W PWR SW - 1 002S009 C/W NORMAL - NORMAL 002S007	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		07-023	MEPS	SCDR	PANEL 1	
					MASTER ALARM PB - RESET	001S001
					NOTE THE FOLLOWING C AND W LITES ON PANEL 2 WILL BE ON.	
					SPS PRESS CRYO PRESS S/M RCS A S/M RCS B S/M RCS C S/M RCS D FC 1 FC 2 FC 3 SUIT COMPRESSOR CMC	
		07-024	MEPS	SCMP	PANEL 2	
					CW NORMAL SW - ACK	002S007
		07-025	MEPS	MTPE	AC BUS PWR UP IS COMPLETE.	
		07-026	MTPE	MREC	ACTIVATE THE PCM.	
		07-027	MREC	UFET	C14-205 CB-6 - CLOSE	
			UFET		CB6 LITE ON	
		07-028	MREC	SCMP	PANEL 225	
					UDL FLT BUS CB - CLOSED	225C010
					SIG COND CB - CLOSED	225C016
		07-029	MREC	SLMP	PANEL 4	
					TELCOM GRP 1 SW - AC1 GRP 2 SW - AC2	 004S004 004S005

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		07-030	MREC	ALL	STANDBY FOR MOMENTARY LOS.		
		07-031	MREC	MACE	GO TO EXTERNAL TIMING ENABLE CM A/B DATA (0000)		R112
		07-032	MREC	MACE	VERIFY EXT SYNC ACQUIRED		
		07-033	MREC		PCM TIMING EXTERNAL LITE ON	CT0340	
					CTE COUNTING (PROPER ADVANCE) (P11-1)	CT0145	
					BIT RATE 01100110 (P11-5)	CT0120	
					PCM HI LEVEL 85 PCT VDC (P11-4) -----	CT0125	4.2 4.3
					PCM HI LEVEL 15 PCT VDC (P11-4) -----	CT0126	0.7 0.8
		07-034	MREC	SLMP	PANEL 3		
					PWR SCE SW - NORM	003S052	
			MREC		SCE POS SUP VDC (P11-2) -----	CT0015	19.5 20.5
					SCE NEG SUP VDC (P11-2) -----	CT0016	-19.5 -20.5
					SCE EX +5V VDC (P11-3) -----	CT0017	4.8 5.2
					SEC EX +10V VDC (P11-3) -----	CT0018	9.6 10.4

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		07-035	MREC	SLMP	PANEL 5		
					INST ESS MNA CB - CLOSED	005C019	
					ESS MNB CB - CLOSED	005C020	
			MEPS		BAT RLY BUS ----- VDC	CC0232	35.5 +/- 2.5
			MSEQ		ELS SAFE LITES (8) ON	CE0310 THRU CE0317	
		07-036	MREC	MTPE	INSTR SYSTEM ACTIVATION COMPLETE.		
		07-037	MTPE	SLMP	PANEL 4 ECS GLYCOL PUMPS SEL - 2 AC 1	004S002	
					TIME ----------		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		08-000			SERVICING OPERATIONS - MIDCOUNT		
-60 00		08-001	MSTC	CVTS	CSM PWR IS ON		
		08-002	MTPE	SCDR	PANEL 8		
					SECS		
					ARM A CB - CLOSE	008C001	
					ARM B CB - CLOSE	008C002	
					LOGIC A CB - CLOSE	008C003	
					LOGIC B CB - CLOSE	008C004	
					RCS LOGIC		
					MNA CB - CLOSE	008C043	
					MNB CB - CLOSE	008C044	
					SECS LOGIC 1 SW - (ON-UP)	008S011	
			MSEQ		LOGIC BUS ARMED LITE ON	CD0089	
					LOGIC BUS SAFE LITE OFF	CD0088	
		08-003	MTPE	SCMP	PANEL 2		
					RCS CMD SW - OFF, REL	002S043	
					RCS TRNFR SW - SM, REL	002S044	
		08-004	MTPE	MSEQ	GSE SM RCS RESET A+B - ON	KR9422	R080
			MSEQ		RCS ENABLE A+B LITES OFF	CD0170	
						CD0171	
					ELS SAFE LITES (8) ON	CE0310	
						THRU	
						CE0317	
					MESC SYS A SAFE LITE ON	CD0084	
					MESC SYS B SAFE LITE ON	CD0085	
					RCS CONTROL SAFE LITE ON	CD0270	
					SMJC A+B SAFE LITES ON	SD0352	
						SD0353	
					PYRO BUS SAFE LITE ON	CD0218	
					PYRO BUS ARM LITE OFF	CD0219	
		08-005	MTPE	SCDR	PANEL 8		
					SECS LOGIC 1 SW - OFF	008S011	
			MSEQ		LOGIC BUS ARMED LITE OFF	CD0089	
					LOGIC BUS SAFE LITE ON	CD0088	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		08-006	MTPE	SCDR	PANEL 8 SECS LOGIC A CB - OPEN 008C003 LOGIC B CB - OPEN 008C004 ARM A CB - OPEN 008C001 ARM B CB - OPEN 008C002	
-59 35		08-006A	CVTS	MSTC	MONITOR CH 121 FOR Q-BALL SIM CMD AT T-59 30. SUPPLY READING TO VUMS ON CH 148.	
					NOTE MTPE WILL MONITOR CH 121 AND GIVE MARK TO SCDR.	
		08-006B		SCDR	PANEL 1 LV ALPHA/SPS PC IND PCNT -----	
					NOTE MTPE GIVE READING TO VUMS ON CH 148.	
-59 05		08-006C	CLTC	MSTC	Q-BALL POWER OFF IN 5 MINUTES.	
-58 30		08-006D	CVTS	MSTC	SMDPS IN 2 SW/1 VLV MODE	
-58 00		08-006E	MTPE	SPAD	PREPARE W/R FOR HOOD RETRACT IN 1 HOUR	
-57 30		08-006F	MTPE	MLFC	PROCEED WITH GSE PWR UP.	
-57 00	121	08-006G	MSTC	CVTS	HAVE SA-9 HOOD RETRACTED	
-56 30	112		MTPE	CTSC	VERIFY LO2 DEWAR TOPOFF AND SAMPLING COMPLETE	
-56 00			MLFC	MTPE	GSE PWR UP CMP REQUEST TRANSPORT OF LH2 AND LO2 DEWARS TO LC 39	
			MSTC	CVTS	VERIFY CPSS CLEARANCE TO TRANSPORT LH2 AND LO2 DEWARS TO LC 39.	
		08-006K	MTPE	SLFC	PROCEED TO LC 39 WITH LH2 AND LO2 DEWARS. REPORT ARRIVAL AT PAD APRON.	
	112	08-006L	MTPE	CTSC	PROCEED TO LC 39 WITH LH2 AND LO2 DEWARS.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		08-006M	MSTC	BOTV	VERIFY/TURN ON THE FOLLOWING CAMERAS AND FOCUS ON APPROPRIATE AREA CAMERA NO. 53 CRYO PODS 54 LO2 VALVE BOX 55 H2 VALVE BOX 47 S14-032 -22' LEVEL 46 S14-026 -22' LEVEL 49 PAD OXIDIZER SIDE 48 PAD FUEL SIDE	
-55	00	08-007	SLFC	MTPE	LH2 AND LO2 DEWARS AT PAD APRON. REQUEST CLEARANCE OF NON-ESSENTIAL PERSONNEL FOR TRANSFER OF LH2 DEWAR TO 4A LEVEL AND LO2 DEWAR TO +12 FT LEVEL. NOTE ESSENTIAL PERSONNEL AT PAD APRON/+12 FT LEVEL FOR TRANSFER OF LH2 DEWAR TO LEVEL 4A IS LOCAL CLEAR AS DETERMINED BY SYSTEM SAFETY. SLFC (1) NASA SLFC (1) NR GSE MECH TECHS (2) SNRS (1) SHTR (1) SNQC (1) PVS1 (1) VEHICLE DRIVERS (2) NOTE ESSENTIAL PERSONNEL AT LEVEL 4A FOR HANDLING/INSTALLATION OF DEWAR IS AS FOLLOWS.. SLFC (1) SNQC NASA SLFC (1) * SGQC SOMD PVSS SHFD SNRS * * ROVING AS REQ'D	

	08-008	MSTC	CVTS	1. CLEAR CONTROL AREA FOR LH2 DEWAR TRANSFER TO MSS LEVEL 4A AND FOR LO2 DEWAR TRANSFER TO +12 FT LEVEL. CONFIGURE ELEVATORS FOR TRANSFER. VERIFY CPSS CLEARANCE FOR TRANSFER. 2. VERIFY HAZARD MONITOR SYSTEM ACTIVE. SEND SEHZ TO CH 222.
-54 30	08-009	MTPE	SLFC	PROCEED WITH LH2 DEWAR TRANSFER. NO PERSONNEL WILL ACCOMPANY THE DEWAR ON THE ELEVATOR. REPORT WHEN CLEAR OF ELEVATOR AND ON CLAMSHELL.
	08-010	MSTC	CTSC	1. CHANGE MOISTURE SAMPLING EQUIP H/U IN 30 MIN. 2. INITIATE VIDEO RECORD OF CAMERAS 53, 55.
-54 00	08-011	SLFC	MTPE	LH2 DEWAR TRANSFER IS COMPLETE. PROCEEDING WITH DEWAR INSTALLATION TO S14-132 FDS. PER TCP-K-10027. READY TO PROCEED WITH LO2 DEWAR TRANSFER TO +12 FT LEVEL.
	08-012	MTPE	SLFC	PROCEED WITH LO2 DEWAR TRANSFER. NO PERSONNEL WILL ACCOMPANY DEWAR ON ELEVATOR. REPORT WHEN DEWAR IN PLACE ON +12 FT LEVEL.

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
	112	08-013	MTPE	CTSC	1. SECURE ELEVATORS FROM DEWAR TRANSFER. 2. PROVIDE MOISTURE SAMPLING EQUIP ON 4A IN 30 MIN.	
		08-013A	MTPE	CTSC	PROVIDE MANIFOLDED GO2 AND GH2 SAMPLE CONTAINERS ON 4A IN 30 MINUTES. SAMPLE WILL BE DRAWN IN 14 HOURS FOR GH2 AND 20 HOURS FOR GO2.	*1
		08-014	MLFC	MTPE	LH2 DEWAR INSTALLATION COMP. REQUEST CLEAR TO PROCEED WITH LH2 SYS PURGING AND SAMPLING.	
		08-014A	MSTC	CVTS	VERIFY CPSS CLEARANCE TO FLOW GH2.	
		08-014B	MTPE	MLFC	PROCEED WITH LH2 SYS OPERATIONS.	
		08-015	MTPE	SNQC SGQC	PROCEED WITH CRYO LOAD INSPECTION PER T/S 8.2.4.6.1	
-52 45		08-015A	MTPE	SPAD	VERIFY HATCH AREA BUILDUP COMPLETE AND READY FOR HOOD RETURN.	
	121	08-015B	MTPE	CVTS	HAVE SA-9 HOOD EXTENDED	
-51 00		08-016	MLFC	MTPE	LH2 DEWAR LEAK CHECK, PURGING AND SAMPLING COMPLETE.	
		08-016A	MTPE	MPUG	PROCEED WITH PUGS QUANTITY READOUT PER SEQ 12 V2.	
		08-016B	MPUG	MTPE	PUGS QUANTITY READOUT COMPLETE.	
-49 00		08-017	MLFC	MTPE	F/C SIM PRESS COMPLETE. PROCEEDING WITH SIM HEATING.	
		08-018			(DELETED)	*1
		08-019			(DELETED)	*1
-47 00		08-020	CVTS	MSTC	BE ADVISED OIS AND PHONES BEING DISCONNECTED FROM OIS FALL BACK TRAILERS.	*1

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-46 30		08-021	MTPE	SPAD SNQC SGQC	COORDINATE WITH GAEC AND PERFORM SLA INTERIOR INSPECT PER T/S 8.2.4.5.10 ON AN ''ON CALL'' BASIS PRIOR TO SILO 3 OPENING.	
					NOTE MASTER ALARM AND MOMENTARY LOS MAY OCCUR AT CMC ACTIVATION.	
-46 00		08-022	MTPE	MGNS MGNR MGNL SCMP MNQC	PERFORM G AND N ACTIVATION PER SEQ 11V2. ON CH 215.	
-44 00		08-023	KSTC	MSTC	HAVE SPAD SUPPORT SLA CUTTER REMOVAL IN THE IU. (PROTECTIVE PADS WILL NOT BE REMOVED. THIS IS NOT A FINAL CLOSEOUT.).	*1
		08-024	MTPE	SPAD	SUPPORT SLA CUTTER REMOVAL PER T/S 8.2.4.5.9 REPORT COMPLETION NR QC NASA QC	*1
		08-025	MGNS	MTPE	REQUEST MACE PROVIDE UPLINK COMMAND FILE TAPE PRINTOUT (DYNAMES 4 AND 12) FOR ----- GMT.	
		08-026	MGNS	MTPE	STANDBY POWER TEST COMPLETE PROCEEDING WITH IMU OPER POWER ON. S/C LIGHTING NOT REQ'D FOR G AND C TESTS.	
-43 15		08-027	MGNS	MTPE	G AND N OPERATIONAL TEST COMPLETE. PROCEEDING WITH IMU PERFORMANCE TEST. REQUEST MINIMUM ACTIVITY IN S/C.	*1
		08-028	MTPE	SPAD	1. RECONFIGURE PTC PER T/S 8.2.4.2.6 2. REPORT COMPLETION NR QC NASA QC	
					NOTE AN OPERATING PTC MUST BE RECONNECTED TO PSA 45J2 WITHIN 15 MIN OF A S/C DC BUS FAILURE.	
-43 00		08-029	CVTS	MSTC	SMDPS INACTIVE FOR 30 MINUTES BUT AVAILABLE ON 30 SECONDS NOTICE.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-42 30		08-030	CVTS	MSTC	SMDPS IS ACTIVE.	
-41 30		08-301	CVTS	MSTC	SILO 4 AIR AIR COND BEING SECURED.	*1
			(DELETED)			*1
		08-032	MLFC	MTPE	F/C HEATING CYCLE (SIM) COMPLETE.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		08-033	MTPE	SPAD	PERFORM ACCESS DOOR STATUS CHECK.	

NOTE

THE FOLLOWING REPRESENTS A SUMMATION OF ACCESS DOOR STATUS. ''ON'' MEANS FLIGHT DOOR INSTALLED WITH MOUNTING. ''OFF'' INDICATES DOOR IS OFF FOR REQUIRED ACCESS, CABLE PENETRATION, HOSE PENETRATIONS, ETC, WHEN CABLES AND HOSES ARE CONNECTED THE AREA IS PROTECTED WITH PLASTIC TO MINIMIZE PROBLEMS DUE TO LEAKS OR SPILLS.

COMMAND MODULE	DESIRED	ACTUAL
CM2	ON	------
CM8	ON	------
CM10	ON	------
CM11	ON	------
CM13	ON	------
CM14	ON	------
CM15	ON	------
CM17	ON	------
CM19	ON	------
CM23	ON	------
CM24	ON	------

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		08-033			COMMAND SERVICE MODULE FAIRINGS		
					CSM1	ON	
					CSM2	ON	
					CSM3	ON	
					CSM4	ON	
					CSM5	ON	
					CSM6	ON	
					CSM7	OFF	
					CSM8	OFF	
					CSM9	ON	
					A34-388 (CSM10)	ON	
					CSM11	ON	
					SERVICE MODULE		
					SM1	ON	
					SM2	ON	
					SM3	OFF	
					SM4	OFF	
					SM5	OFF	
					SM6	OFF	
					SM7	OFF	
					SM8 (8 EA)	ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		08-033			SM9 (2 EA)	ON	

					SM10 (6 EA)	ON	

					SM11	OFF	

					SM12	OFF	

					SM13	OFF	

					SLA		

					C1	ON	

					C2	ON	

					C3	ON	

					C4	ON	

					D1	OFF	

					D2	OFF	

					D3	OFF	

					D4	OFF	

					D5	OFF	

					D6	OFF	

					D7	OFF	

					D8	OFF	

					D9	OFF	

					D10	OFF	

					D11	OFF	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		08-033			D12	OFF	
					D13	ON	
					D14	ON	
					D15	ON	
					D16	ON	
					+YII	ON	
					-ZI	ON	
					+ZIII	ON	
					-YIV	ON	
		08-034	MTPE	SNQC SGQC	REPORT COMPLETION OF CRYO LOADING INSPECT (PER T/S 8.2.4.6.1	NR QC NASA QC	
-41	30	08-035	MTPE	SPAD	REPORT COMPLETION OF FOLLOWING T/S...		
					A. 8.2.4.2.1 THRU 8.2.4.5	NR QC NASA QC	* 1
					B. 8.2.4.3.1 THRU 8.2.4.3.13	NR QC NASA QC	
					C. 8.2.4.4.1 THRU 8.2.4.4.9	NR QC NASA QC	
					D. 8.2.4.5.1 THRU 8.2.4.5.8	NR QC NASA QC	
					E. 8.2.4.6.2	NR QC NASA QC	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-41 00		08-036	MLFC	MTPE	CLEAR PERSONNEL FOR LH2 FLOW. LOADING PREPS IN PROGRESS	
		08-037	MSTC	CVTS	1. CLEAR CONTROL AREA FOR SC LH2 SERVICING 2. VERIFY CPSS CLEARANCE TO START LH2 SERVICING. 3. CHANGE SMDPS FROM 2 SW/1 VLV TO 2 SW	
	222	08-038	KSTC	MSTC	SLA FREON/H20 DELUGE CONTROL WILL BE TRANSFERRED TO RESPONSIBLE NR ENGINEER.	
		08-039	MTPE	SPAD	TRANSFER SLA FREON/H20 DELUGE CONTROL PANEL TO NR CONTROL.	
		08-040	MTPE	SPAD	CLEAR ALL NON-ESSENTIAL PERSONNEL FOR LH2 SERVICING. CLEAR TO 1100 FT.	

NOTE

FOLLOWING PERSONNEL REQUIRED ON STATION..

4A LEVEL	4C LEVEL		
SPAD	SCMP		
	SLMP	COMPT 1A	
		LMDR	
SHFD	-22 FT LEVEL	LNQC	
SLHM	SFET		
SSMT	SPDS		
SNQC	SLHM		
SGQC	SLHT	ROVING	*1
BENDIX	SNQC	PVSS	
SAMPLERS(2)		SNRS	
0 LEVEL	PAD APRON	SLFC (2)	
SEHZ (2)	PNQC	SLFC (NASA)	
	PLHM		
	NR VEHICLE DRIVERS (2)		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		08-041	MSTC		NOTE - REVIEW EVACUATION PROCEDURE WITH SCMP, SLMP IN CASE GN2 DELUGE IS TURNED ON.	

NOTE

DURING LH2 LOADING, SEHZ WILL MONITOR HYDROGEN DETECTION SYSTEM METERS AND INFORM MSTC OF ALL HYDROGEN INDICATIONS, SPECIFYING SENSOR I.D. AND (PERCENT GAS CONCENTRATION. SYSTEM SAFETY (PVSS) WILL VERIFY READINGS USING PORTABLE GAS DETECTOR. (A FOUR PERCENT CONCENTRATION OF HYDROGEN CONSTITUTES AN EXPLOSIVE ATMOSPHERE). MSTC DIRECT SECURING OF LH2 FLOW UNDER CONDITIONS OF RAPID INCREASE IN H2 CONCENTRATION OR A REPORTED READING NEARING FOUR PERCENT AT ANY SENSOR. TIME PERMITTING, MSTC WILL CONFER WITH PVSS AND MLFC PRIOR TO DIRECTING ANY INTERRUPTION OF FLOW. MSTC WILL DIRECT USE OF THE GN2 DELUGE PURGE AS FOLLOWS..

1. CLEAR ALL PERSONNEL FROM MSS LEVELS 3 AND 4 AND OBTAIN CPSS VERIFICATION.
2. DIRECT CSAT TO TURN ON DELUGE PURGE. IN CASE OF FIRE IN THE SM DURING CRYOGENIC LOADING, MSTC WILL DIRECT USE OF THE SM DELUGE PURGE AS OUTLINED ABOVE. EMERGENCY PROCEDURES IN SECTION V WILL BE FOLLOWED. FIRE PROCEDURES ARE IN TCP-K-0209V2, LC 39.

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-40 00		08-042	CVTS	MSTC	CLEAR TO PROCEED WITH LH2 SERVICING SMDPS IS IN 1 SW MODE.	*1
		08-043	MTPE	MLFC	PROCEED WITH LH2 SERVICING.	
-37 00		08-044	MLFC	MTPE	1. LH2 LOADING COMPLETE AND DEWAR INERTED. PROCEEDING WITH DISCONNECTING AND REMOVAL OF LH2 DEWAR.	
					2. REQUEST CLEARANCE OF NON-ESSENTIAL PERSONNEL FOR TRANSFER OF LO2 DEWAR TO 4A LEVEL.	

NOTE

ESSENTIAL PERSONNEL AT +12 FT LEVEL FOR TRANSFER OF LO2 DEWAR TO LEVEL 4A IS AS FOLLOWS..

SLFC (1)
NASA SLFC (1) *
NR GSE MECH TECHS (2)
SNRS (1) *
SNQC (1)
PVSI (1)

NOTE

ESSENTIAL PERSONNEL AT LEVEL 4A FOR HANDLING/INSTALLATION OF DEWAR IS AS FOLLOWS..

SLFC (1)
NASA SLFC (1) *
SOMD
SHFD
SNQC
SGQC
PVSS
SNRS *

* ROVING AS REQ'D

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		08-045	MSTC	CVTS	1. CLEAR CONTROL AREA FOR LO2 DEWAR TRANSFER TO 4A. 2. VERIFY CPSS CLEARANCE TO TRANSFER. 3. CONFIGURE ELEVATORS FOR TRANSFER OF LO2 DEWAR TO 4A.	
		08-046	MTPE	SLFC	PROCEED WITH LO2 DEWAR TRANSFER TO 4A LEVEL. NO PERSONNEL WILL ACCOMPANY DEWAR ON ELEVATOR. REPORT WHEN CLEAR OF ELEVATOR.	
		08-047	MTPE	CTSC	1. MOISTURE SAMPLE SUPPORT REQUIRED ON 4A IN 30 MIN. 2. INITIATE VIDEO RECORDING OF CAMERA 54.	
		08-048	SLFC	MTPE	LO2 DEWAR AT 4A' LEVEL PROCEEDING FDS CONNECTIONS PER K-10027	
		08-049	MTPE	CTSC	SECURE ELEVATOR FROM DEWAR TRANSFER.	
-36 00		08-050	MLFC	MTPE	LO2 DEWAR INSTALL COMP. PROCEEDING WITH LEAK CHECK AND PURGING	
-35 00		08-051	MLFC	MTPE	LO2 LK CK AND PURGE COMPLETE. REQUEST CPSS CONCURRENCE FOR LO2 SERVICING.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		08-052	MTPE	SPAD	CLEAR ALL NON-ESSENTIAL PERSONNEL FOR LO2 SERVICING. CLEAR TO 1100 FT.	

NOTE

FOLLOWING PERSONNEL REQUIRED ON STATION..

4A LEVEL	4C LEVEL	COMPT 1A
SPAD	SCMP	LMDR
	SLMP	LNQC
SOMD	-22 FT. LEVEL	
SLOM		
SSMT		
SNQC	SLOM	SPDS
SGQC	SLOT	SFET
BENDIX SAMPLER (2)	SNQC	
ROVING	PAD APRON	
SLFC (2)		
PVSS	PLOM	
SNRS	PNQC	
SLFC (NASA)		
	VEHICLE DRIVERS (2)	

-34 00		08-053	MSTC	CVTS	VERIFY CPSS CLEARANCE TO START LO2 SERVICING.	
		08-054	MTPE	MLFC	PROCEED WITH LO2 SERVICING.	
		08-055			DELETED	*1

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-32 00		08-056	MLFC	MTPE	LO2 LOADING CMP. PROCEEDING WITH LO2 TANK VENT SAMPLING	
		08-057			(DELETED)	*1
-30 30		08-058	MLFC	MTPE	GAS SAMPLING COMPLETE. PROCEEDING WITH TK PRESS.	
					NOTE PRESS WILL NOT EXCEED 25 PERCENT D.B. (127 PSIA-H2, 394 PSIA-02)	
		08-059	MTPE	SCMP	PANEL 326 SM SUPPLY VLV - ON	
-30 00	✓	08-060	MLFC	MTPE	CRYO PRESSURIZATION COMPLETE. PROCEEDING WITH H2 FAN TEST AND DETANK.	*1
	✓	08-061	MSTC	CVTS	CRYO PRESSURIZATION COMPLETE. CONTROL AREA MAY BE OPENED VERIFY WHEN OPEN CHANGE SMDPS TO 2 SW 1 VLV MODE	
		08-062	MSTC	CTSC	CLEAR TO SECURE VIDEO RECORD - CAMERAS 53, 54, 55.	
		08-063	MTPE	SPAD	HAVE SC PERSONNEL REPORT ON STATION.	
					NOTE WAIT FOR SPAD TO REPORT PERSONNEL ON STATION.	
-29 30	✓	08-064	MLFC	MTPE	LH2 FAN CKS COMPL. PROCEEDING WITH LH2 DETANK AND LO2 TK 1 DETANK AND QUANTITY ADJUST ON TK 2.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
-29 30		08-064A	KSTC	MSTC	1. TRANSFER SLA FREON/H2O CONTROL TO LM PAD LEADER. 2. HAVE SPAD PREPARE TO SUPPORT SLA PENETRATION CLOSEOUT UNTIL SILO 3 OPENING.	*1
-29 00		08-064B	KSTC	MSTC	HAVE SPAD SUPPORT SLA CUTTER AND PLATFORM REMOVAL ON LEVEL 3A. UPPER SLA (XA 697 LEVEL) PLATFORMS TO BE REMOVED PERMANENTLY. FINAL SLA INSPECTION ON THAT LEVEL TO BE PERFORMED.	*1
		08-064C	MTPE	SPAD	SUPPORT SLA CUTTER REMOVAL AND UPPER SLA (XA 697 LEVEL) PLATFORM REMOVAL. REMOVE PADS AND PERFORM FINAL INSPECTION ON THAT LEVEL PER T/S 8.2.4.5.9 AND 8.2.4.5.10. REPORT COMPLETION.	

NR QC NASA QC
*1

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-28 00		09-000			COUNTDOWN OPERATIONS - CDDT	
		09-001	MTPE	SPAD	PROCEED WITH FOLLOWING T/S ...	
					A. 8.2.5.3.10, 11, 12	
					B. 8.2.5.4.1, 2, 3, 4.	
					C. 8.22.2	*1
		09-001A	MTPE	MECS	PERFORM SUIT WICK VERIF PER SEO 05V2	*1
		09-002	MTPE	SLFC	DISCONNECT BACKUP LH2 DEWAR PER K-10027.	
		09-003	MTPE	CTSC	INERTED LH2 DEWAR WILL BE ON BASE OF PAD IN 30 MIN.	
		09-004			(DELETED)	*1
		09-004A	CVTS	MSTC	SILO 4 AIR COND BEING POWERED UP.	*1
-30		09-005	MLFC	MTPE	LH2 AND LO2 DETANK COMPL. PROCEEDING WITH LO2 TK 1 FAN CKS.	
-27 00		09-006	MLFC	MTPE	O2 TK 1 FAN CHECKS COMPL. PROCEEDING WITH LINE INERTING.	
-26 00		09-007	MLFC	MTPE	LINE INERTING COMPL. PROCEEDING WITH GSE PWR DN. GO2 AND GH2 TUBE BANKS MAY BE DISCONNECTED AND REMOVED PER K-10027. CRYO (O2 + H2) STUB TOWERS MAY BE DISCONNECTED AT THIS TIME PER K-10027.	
		09-008	MLFC	MTPE	1. READY FOR CRYO GSE DISCONNECTION.	
					2. PROCEEDING WITH GSE POWER DOWN.	
					3. READY FOR FACILITY GHE SUPPLY TO TRANSFER UNIT S14-032 TO BE CLOSED.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-009	MTPE	SPAD	1. PROCEED WITH H2 DETECTOR REMOVAL PER TEST SETUP 8.2.5.3.1 THRU 8.2.5.3.4 REPORT COMPLETION NR QC NASA QC	
					2. DISCONNECT CRYO SERVICE LINES PER TEST SETUP 8.2.5.3.5, 8.2.5.3.6 AND 8.2,5.3.9 REPORT COMPLETION NR QC NASA QC	
					3. PROCEED WITH T/S 8.2.5.3.8 REPORT COMPLETION NR QC NASA QC	
		09-009A	MTPE	CTSC	CLEAR TO SECURE MSS 3000 PSI GHE.	*1
		09-010	MLFC	MTPE	GSE POWER DOWN COMPLETE READY FOR MSS CABLE DISCONNECT. THE A34-329 AT H2 PAD TO BE REMOVED.	
		09-011	MTPE	SLFC	DISCONNECT LO2 DEWAR PER K-10027.	
		09-012	MTPE	CTSC	LO2 DEWAR WILL BE ON BASE OF PAD IN 30 MIN.	
		09-013	MTPE	MECS	VERIFY RAD HEATER MOTOR SWT EVENT LITES OFF	
		09-014	MTPE	SPAD	DISCONNECT GSE ACCESS CONNECTORS J17, J18, J19, J20 PER T/S 8.2.5.3.7 AND C14-368 CABLES PER T/S 8.2.5.6.3B.	
		09-015	MTPE	SNQC	REPORT VERIF. OF PREVIOUS SEQ. COMPLETION. NR QC NASA QC	
		09-016	MTPE	SPDS	C14-626 PS 5 BUS B CB1 - OPEN CB2 - OPEN CB8 - OPEN CB9 - OPEN	
		09-017	MTPE	SPAD	PROCEED WITH DISCONNECT OF MSS/PAD INTERCONNECT CABLES (NR ONLY, NOT GAEC) PER TEST SETUP 8.2.5.6.1. REPORT COMPLETION. NR QC NASA QC	

ME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-018	MTPE	SPAD	REPORT COMPLETION OF T/S 8.2.5.3.12.	------ NR QC ------- NASA QC

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARK
-25 30		09-019	MSTC	CVTS	CLEAR TO SECURE MSS 3000 PSI GN2.	
		09-020	MTPE	SPAD	REMOVE CM INTERIOR PROTECTIVE COVER PER T/S 8.2.5.1.2 REPORT COMPLETION. ------ NR QC ------- NASA QC	
-24 05		09-021	CVTS	MSTC	VERIFY CMD DECO DER OFF FOR MCC CMD TEST WITH GMIL	*1
		09-022	MGNS	MTPE	IMU PERFORMANCE TEST COMPLETE.	
		09-023	MTPE	MSCL MSCR	RECORDER 17 1/4 2/X 3/1 4/X 5/3 6/1 7/3 8/1 RECORDER 19 1/4 2/4 3/1 4/X 5/3 6/1 7/3 8/1	
					CAUTION RCS ENGINES ARE CONNECTED. AUTO RCS SELECT SWITCHES (16), ON PANEL 8 SHALL REMAIN OFF UNTIL AFTER PRIME CREW INGRESS.	
		09-024	MTPE	SCDR	PANEL 8 SCS TVC AC1 CB - CLOSE 008C055 AC1 CB - CLOSE 008C009 AC2 CB - CLOSE 008C010 ECA/TVC AC2 CB - CLOSE 008C054 DIRECT ULL MNA CB - OPEN (GUARDED) 008C072 MNB CB - OPEN (GUARDED) 008C073 CONTR/DIRECT 1 MNA CB - OPEN 008C013 1 MNB CB - OPEN 008C014 2 MNA CB - OPEN 008C070 2 MNB CB - OPEN 008C071	

TIME	COMM CM	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-024			ORDEAL	
					AC 2 CB - CLOSE	008C065
					MNB CB - CLOSE	008C064
					SCS	
					CONTR/AUTO	
					MNA CB - CLOSE	008C074
					MNB CB - CLOSE	008C075
					LOGIC BUS	
					1/2 MNA CB - CLOSE	008C063
					3/4 MNA CB - CLOSE	008C023
					1/4 MNB CB - CLOSE	008C062
					2/3 MNB CB - CLOSE	008C024
					SYS	
					MNA CB - CLOSE	008C011
					MNB CB - CLOSE	008C012
					EMS	
					MNA CB - CLOSE	008C052
					MNB CB - CLOSE	008C053
					SPS	
					PITCH 1 BAT A CB - OPEN	008C031
					PITCH 2 BAT B CB - OPEN	008C032
					YAW 1 BAT A CB - OPEN	008C033
					YAW 2 BAT B CB - OPEN	008C034
					PILOT VLVS	
					MNA CB - OPEN (GUARDED)	008C068
					MNB CB - OPEN (GUARDED)	008C069
		09-025	MTPE	SCDR	PANEL 7	
					FDAI/GPI PWR SEL - OFF	007S003
					SCS	
					ELEC PWR SEL - ECA	007S005
					BMAG PWR	
					1 SEL - OFF	007S006
					2 SEL - OFF	007S007
					SCS	
					TVC SERVO PWR	
					1 SW - OFF	007S008
					2 SW - OFF	007S009
					LOGIC PWR 2/3 SW - ON (UP)	007S010
					SIG COND/DR BIAS PWR	
					1 SW - AC1	007S011
					2 SW - AC2	007S012

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARK
		09-026	MTPE	SCDR	PANEL 7	
					FDAI/GPI PWR SEL - BOTH	007S003
		09-027	MTPE	MSCL	RECORD SCS NULL VOLTAGE FOR ENGINEERING INFORMATION ONLY.	
				MSCL	ROLL AT ER DEG. (P17-2) -----	CH3502
					PITCH AT ER DEG. (P17-2) -----	CH3500
					YAW AT ER DEG. (P17-2) -----	CH3501
					ROLL RATE DG/S (P17-3) -----	CH3505
					PITCH RATE DG/S -----	CH3503
					YAW RATE DG/S (P17-3) -----	CH3504
		09-028	MTPE	SCDR	PANEL 1	
					TRANS CONT PWR SW - OFF	001S066
					ROT CONTR PWR	
					NORM 1 SW - OFF	001S064
					NORM 2 SW - AC/DC	001S065
					DIRECT 1 SW - OFF	001S013
					DIRECT 2 SW - OFF	001S067
					SC CONT SW - CMC	001S018
				MGNR	G/N AP CONTROL LITE ON	
				MSCR	SCS CONT MODE LITE OFF	CH3607
					GYRO 1 SMRD LITE ON	CH3623
					GYRO 2 SMRD LITE ON	CH3624
					ATT DB MIN LITE ON	CH3588
					ROLL BMAG RATE 2 LITE ON	CH3636
					PITCH BMAG RATE 2 LITE ON	CH3639
					YAW BMAG RATE 2 LITE ON	CH3642
					LIMIT CYCLE ON LITE OFF	CH3606

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
-25 15		09-029	MTPE	MGNR	K148 INSERT V48 E V24 E 31013 E 11111 E V34 E	
			MGNR		CSM/S-IVB DAP LITE ON	
		09-030	MTPE	MGNR	K148 INSERT V46 E	
			MGNR		IMU ERR CTR ENABLE LITE ON	
		09-031	MSTC	CVTS	CSM READY FOR S/C CONTR OF SAT ATT CMD CHECKS	
		09-032	MSTC	CUSP CUCR CUSW C4FC	VERIFY READY FOR S/C CONTR OF SAT ATT CMD CHECKS	
		09-033	MSTC	CUSW	ISSUE OCTAL 031 (S/C CONTROL OF SATURN INHIBIT - OFF)	
		09-034	MSTC	SCDR	LV GUID SW - CMC	
			MGNR		S/C CONTROL SAT LITE ON SAT TAKOVER ENABLE LITE ON	
		09-035	MSTC	CUSP	VERIFY S/C CONTROL INDICATION ON	
		09-036	MSTC	SCDR	RHC 2 - ARMED	
		09-037	MSTC	CUSP	S-IVB COAST MODE SW - ON	
		09-038	MSTC	SCDR	RHC 2 - (+) ROLL SOFT STOP	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARK
		09-039	MSTC	CUCR C4FC	VERIFY PLUS ROLL COMMAND, I-IV AND III-II APS FIRING	
		09-040	MSTC	SCDR	RHC 2 - (-) ROLL SOFT STOP	
		09-041	MSTC	CUCR C4FC	VERIFY MINUS ROLL COMMAND, I-II AND III-IV APS FIRING	
		09-042	MSTC	SCDR	RHC 2 - (+) PITCH SOFT STOP	
		09-043	MSTC	CUCR C4FC	VERIFY PLUS PITCH COMMAND, I-P APS FIRING	
		09-044	MSTC	SCDR	RHC 2 - (-) PITCH SOFT STOP	
		09-045	MSTC	CUCR C4FC	VERIFY MINUS PITCH COMMAND, III-P APS FIRING	
		09-046	MSTC	SCDR	RHC 2 - (+) YAW SOFT STOP	
		09-047	MSTC	CUCR C4FC	VERIFY PLUS YAW COMMAND, I-II AND III-II APS FIRING.	
		09-048	MSTC	SCDR	RHC 2 - (-) YAW SOFT STOP	
		09-049	MSTC	CUCR C4FC	VERIFY MINUS YAW COMMAND, I-IV AND III-IV APS FIRING	
		09-050	MSTC	SCDR	RHC 2 - NEUTRAL, THEN LOCK.	
		09-051	MSTC	CUSW	ISSUE IU OCTAL 051	
		09-052	MSTC	CUSP	VERIFY S/C CONTROL INDICATION OFF	
		09-053	MSTC	CUSP	S-IVB COAST MODE SW - OFF	
		09-054	MSTC	SCDR	LV GUID. SW - IU	
		09-055	MSTC	CUSP CUCR CUSW C4FC	TEST COMPLETE. RETURN TO ASSIGNED CHANNELS	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-056	MTPE	SCDR	PANEL 1	
					TRANS CONT PWR SW - OFF	001S066
					ROT CONTR PWR	
					NORM 1 SW - OFF	001S064
					NORM 2 SW - OFF	001S065
					DIRECT 1 SW - OFF	001S013
					DIRECT 2 SW - OFF	001S067
					SC CONT SW - SCS	001S018
					PANEL 7	
					FDAI/GPI PWR SEL - OFF	007S003
					BMAG PWR	
					1 SEL - OFF	007S006
					2 SEL - OFF	007S007
					SCS	
					TVC SERVO PWR	
					1 SW - OFF	007S008
					2 SW - OFF	007S009
					ELEC PWR SEL - OFF	007S005
					LOGIC PWR 2/3 SW - OFF	007S010
					SIG COND/DR BIAS PWR	
					1 SW - OFF	007S011
					2 SW - OFF	007S012
					PANEL 8	
					SCS	
					TVC AC1 CB - OPEN	008C055
					AC1 CB - OPEN	008C009
					AC2 CB - OPEN	008C010
					ECA/TVC AC2 CB - OPEN	008C054
					DIRECT ULL	
					MNA CB - OPEN (GUARDED)	008C072
					MNB CB - OPEN (GUARDED)	008C073
					CONTR/DIRECT	
					1 MNA CB - OPEN	008C013
					1 MNB CB - OPEN	008C014
					2 MNA CB - OPEN	008C070
					2 MNB CB - OPEN	008C071
					A/C	
					MNA CB - OPEN	008C015
					MNB CB - OPEN	008C016

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-056			B/D ROLL	
					MNA CB - OPEN 008C017	
					MNB CB - OPEN 008C018	
					PITCH	
					MNA CB - OPEN 008C019	
					MNB CB - OPEN 008C020	
					YAW	
					MNA CB - OPEN 008C021	
					MNB CB - OPEN 008C022	
					ORDEAL	
					AC2 CB - OPEN 008C065	
					MNB CB - OPEN 008C064	
					SCS	
					CONTR/AUTO	
					MNA CB - OPEN 008C074	
					MNB CB - OPEN 008C075	
					LOGIC BUS	
					1/2 MNA CB - OPEN 008C063	
					3/4 MNA CB - OPEN 008C023	
					1/4 MNB CB - OPEN 008C062	
					2/3 MNB CB - OPEN 008C024	
					SYS	
					MNA CB - OPEN 008C011	
					MNB CB - OPEN 008C012	
					EMS	
					MNA CB - OPEN 008C052	
					MNB CB - OPEN 008C053	
					SPS	
					PITCH 1 BAT A CB - OPEN 008C031	
					PITCH 2 BAT B CB - OPEN 008C032	
					YAW 1 BAT A CB - OPEN 008C033	
					YAW 2 BAT B CB - OPEN 008C034	
-23 05		09-057	CVTS	MSTC	Q BALL POWER COMING ON IN 5 MINUTES.	
-23 00	112	09-058	MSTC	CTSC	VERIFY CSM OPTICS FIELD TARGETS ILLUMINATED	
		09-059	MTPE	MGNS	PROCEED WITH GYRO COMPASSING PER SEQ 11 V2.	
-22 00		09-060			NOTE WEST MSS ELEVATOR LOCKED OUT UNTIL T-21 00.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-061	MGNS	MTPE	REQUEST SPAD REMOVE/VERIFY OPTICS COVERS AND ESTABLISH A CLEAR LINE OF SIGHT TO TARGETS. ------ NR QC ------- NASA QC	
-21 35		09-062	CVTS	MSTC	MONITOR CH 121 FOR Q BALL SIM CMD IN 5 MIN. PROVIDE READOUTS TO VUMS ON CH 148.	
					NOTE MTPE WILL MONITOR CH 121 AND GIVE MARK TO SCDR AND MREC ON CH 222.	
				SCDR	PANEL 1 LV ALPHA/SPS PC IND ----- PCNT	
				MREC	ANGLE OF ATTACK (P11-8) ----- PCNT LS0200	
					NOTE MTPE GIVE READING TO VUMS ON CH 148.	
		09-063			(DELETED)	*1
-21 05		09-064	MTPE	MGNS	PROCEED WITH OPTICAL SIGHTINGS.	
		09-065	CVTS	MSTC	1. Q-BALL POWER OFF IN 5 MINUTES. 2. REQUEST CLEARANCE TO W/R FOR 3 FILM CAMERA CHECKERS FOR 15 MINUTES.	*1
					NOTE DELETED	*1
		09-066			LUT WALKDOWN STARTING (L/V)	
-21 00		09-066A	KSTC	MSTC	SLA(+Z 603) PLATFORMS (XA603 LEVEL) TO BE REMOVED. HAVE SPAD SUPPORT INSPECTION (THIS IS NOT FINAL CLOSEOUT).	*1
		09-066B	MTPE	SPAD	SUPPORT SLA PLATFORM REMOVAL (XA603) LEVEL +Z ONLY). PADS REMAIN INSTALLED.	*1

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
-20 32		09-067	MTPE	SCDR	PANEL 8..		
					EDS		
					1 CB - CLOSE	008C049	
					2 CB - CLOSE	008C050	
					3 CB - CLOSE	008C051	
					PANEL 2		
					EDS AUTO SW - (ON-UP)	002S067	
		09-068A	MLCS	MTPE	SUIT WICK VERIFICATION COMPLETE		*1
		09-068	MTPE	MSTC	MOVE TO CH 223 FOR EDS CHECK PER		
				SCDR	TCP-K-0042.		
				MSEQ			
				MGNR			
				MACE			
				MNQC			
-20 30		09-069	MSTC	CVTS	1. CSM EDS POWER IS COMING ON		
					2. CSM PERSONNEL ON CH 223 FOR EDS TEST		
					NOTE		
					THE FOLLOWING SEQ TO BE PERFORMED AFTER TCP K-0042 CALL TO STATION.		
	223	09-070	MSTC	SCDR	PANEL 7..		
					EDS POWER SW - (ON-UP)	007S001	
					TIME		

			MSEQ		EDS VOTE 1 OUT LITE ON	CD0132	
					EDS VOTE 2 OUT LITE ON	CD0133	
					EDS VOTE 3 OUT LITE ON	CD0134	
-20 00		09-071	MTPE	SPAD	REMOVE CM FLOOR PADS PER T/S 8.2.5.1.1 REPORT COMPLETION.	------ NR QC	------- NASA QC
		09-071A	CVTS	MSTC	SILO 4 AIR COND BEING POWERED DOWN		*1
	222	09-072	MSEQ	MTPE	EDS TESTING COMPLETE.		
		09-073	MTPE	SCDR	PANEL 7..		
					EDS POWER SW - OFF	007S001	
					TIME		

					PANEL 2		
					EDS AUTO SW - OFF	002S067	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-073			PANEL 8..	
					EDS	
					1 CB - OPEN	008C049
					2 CB - OPEN	008C050
					3 CB - OPEN	008C051
			MSLQ		EDS VOTE 1 OUT LITE OFF	CD0132
					EDS VOTE 2 OUT LITE OFF	CD0133
					EDS VOTE 3 OUT LITE OFF	CD0134
		09-074	MSTC	CVTS	CSM EDS POWER IS OFF.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-19 45		09-075	MTPE	MSTC SCDR MGNR MNQC	SWITCH TO CH 223	*1
		09-076	MSTC	CVTS	CSM PERSONNEL ON CH 223 TO SUPPORT FT 25.	
	223	09-077	CLGK	SCDR	PANEL 2 LV S-II/S-IVB SW - LV STAGE LV S-II/S-IVB SW - OFF LV GUID SW - CMC	
			MGNR		S/C CONTROL OF SAT LITE ON	
		09-078	CLGK	SCDR	LV XLUNAR SW - INJECT LV XLUNAR SW - SAFE LV GUID SW - IU	
	223	09-079	CLGK	SCDR	SUPPORT NO LONGER REQUIRED	
		09-080	MSTC	SCDR MGNR MNQC	SWITCH TO CH 222	
-19 00		09-081	MGNS	MTPE	1. FINAL OPTICAL VERIFICATION COMPLETED. 2. READY FOR OPTICS COVER INSTL.	
		09-082	MTPE	SPAD	PROCEED WITH STOWAGE PER TCP K-3300. REPORT COMPLETION. NR QC NASA QC	
		09-083	MTPE	SPAD	PROCEED WITH OPTICS COVER INSTL PER T/S 8.2.5.2.1., 8.2.5.2.2 AND 8.2.5.2.4 REPORT COMPLETION NR QC NASA QC	
		09-084	MTPE	SNQC SGQC	PROCEED WITH MSS INSPECT PER T/S 8.2.5.6.5	
		09-084A	KSTC	MSTC	SLA 525 PLATFORMS TO BE REMOVED. HAVE SPAD SUPPORT INSPECTION. (PROTECTIVE PADS WILL NOT BE REMOVED. THIS IS NOT FINAL CLOSEOUT).	*1
		09-084B	MTPE	SPAD	SUPPORT SLA PLATFORM REMOVAL (XA525). PROTECTIVE PADS REMAIN INSTALLED.	*1

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
-17 00		09-085	CVTS	MSTC	RECONFIGURE SA-8 ECS CONDITIONING DUCT TO FLIGHT CONFIG	
		09-086	MTPE	SPAD	RECONFIGURE SA-8 ECS COND DUCT TO FLIGHT CONFIG. PER T/S 8.2.5.6.7. REPORT COMPLETION. ------ NR QC ------- NASA QC	
		09-087	MTPE	SPAD	REPORT COMPLETION OF FOLLOWING T/S..	
					A. 8.2.5.3.10, 11, ------ NR QC ------- NASA QC	
					B. 8.2.5.4.1, 2, 3, 4 ------ NR QC ------- NASA QC	
-16 20		09-088	MTPE	SPAD	PROCEED WITH PLAT 4 BREAKUP PER TEST SETUP 8.2.5.6.4 REPORT COMPLETION. ------ NR QC ------- NASA QC	
		09-089	MTPE	SPAD	VERIFY READY FOR SILO 4 OPENING.	
		09-090	MSTC	CVTS	PLATFORM 4 IS AVAILABLE FOR OPENING.	
		09-091	MSTC	CTSC	CLEAR TO PREP CABIN PURGE SETUP.	
-15 45		09-092			SILO 4 BREAKUP START (SUPPORT)	
-15 35		09-093	MTPE	SPAD	VERIFY READY FOR SILO 5 BREAKUP.	
		09-094	MSTC	CVTS	PLATFORM 5 IS AVAILABLE FOR OPENING.	
		09-095	MTPE	SCDR	PANEL 8	
					EDS	
					1 CB - CLOSE	008C049
					2 CB - CLOSE	008C050
					3 CB - CLOSE	008C051

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-096	MSTC	SCDR	PANEL 7	
					EDS PWR SW (ON-UP)	
				MSEQ	EDS VOTE 1 OUT LITE ON CD0132 EDS VOTE 2 OUT LITE ON CD0133 EDS VOTE 3 OUT LITE ON CD0134	
		09-097	MSTC	SCDR	STANDBY ON CH223 TO REPORT ABORT REQUEST LITE CYCLING DUE TO L/V TESTING.	
		09-098	MSTC	CVTS	EDS PWR IS ON SCDR ON CH 223 FOR ABORT LITE CK.	
	223	09-099	CLTC	SCDR	VERIFY ABORT LITE ON	
	223	09-100	CLTC	SCDR	VERIFY ABORT LITE OFF.	
-15 30		09-101	MSTC	CVTS	CLEAR TO REMOVE SA-8 YELLOW LADDER.	
-15 15		09-102			SILO 5 BREAKUP START (SUPPORT)	
		09-103	CVTS	MSTC	REQUEST EDS PWR OFF ABORT LITE CK COMPLETE	
		09-104	MSTC	SCDR	PANEL 7	
					EDS PWR SW - OFF	
				MSEQ	EDS VOTE 1 OUT LITE OFF CD0132 EDS VOTE 2 OUT LITE OFF CD0133 EDS VOTE 3 OUT LITE OFF CD0134	
		09-105	MSTC	CVTS	EDS PWR IS OFF	
		09-106	MTPE	SCDR	PANEL 8	
					EDS 1 CB - OPEN 008C049 2 CB - OPEN 008C050 3 CB - OPEN 008C051	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-106			NOTE VERIFY GAEC THROUGH WITH PS 1 + 5 BEFORE PROCEEDING.	
-14 30		09-107	CVTS	MSTC	VERIFY READY FOR SA-8 TIP RETRACT.	
-14 15		09-108			SILO 5 OPEN (SUPPORT)	
-14 00		09-109	KSTC	MSTC	PS 1 + 5 MAY BE SECURED FOR LAUNCH.	
		09-110	MEPS		PS 5 BATT ENABLE (R094) - OFF	KC7711
			MEPS		PS 5 BAT EN LITE OFF	GC5145
			MEPE		PS 5 BAT EN LITE OFF	GC5145
			SPDS		C14-628 PS 5 BATTERY ON LITE OFF	
		09-111	MEPS	MEPE	FEEDER BUS C (C076) - OFF	KC7714
			MEPE		220 3234 330 IS INSERTED	
			MEPE		PS 5 GSE BUS C ON LITE OFF	GC5148 10C28
			SPDS		C14-628 PS 5 FEEDER BUS C ON LITE OFF	
		09-112	MEPS	MEPE	FEEDER BUS B (C076) - OFF	KC7713
			MEPE		220 3234 320 IS INSERTED	
			MEPE		PS 5 GSE BUS B ON LITE OFF	GC5147 10C27
			SPDS		C14-628 PS 5 FEEDER BUS B ON LITE OFF	
		09-113	MEPS		PS 5 DC ON (R094) - OFF	KC7710
			MEPS		PS 5 OUTPUT ON LITE OFF GSE BUS PS 5 IS 0+ 2-0 (P2-23)	GC5143 10C25 GC5150
			MEPE		PS 5 OUTPUT ON LITE OFF	GC5143 10C25
			SPDS		C14-626 PS 5 DC OUTPUT POWER ON LITE OFF	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		09-114	MEPS		PS 5 AC START (R094) - OFF	KC7709	
			MEPS		PS 5 OUTPUT VDC INDICATES 0+/-1(M)	GC5146	
			MEPE		PS 5 OUTPUT VDC INDICATES 0+/-1 (P2-15)	GC5146	
			SPDS		C14-626 PS5 AC INPUT POWER ON LITE OFF		
		09-115	MEPS	MACE	REMOVE DTCS 3 SURVEILLANCE ROUTINE		C124
					33 0010 5106 ~~33 0010 5104~~ e		
		09-116	MEPS	CSGS	MSS ACE PS BATT ENABLE - OFF		
			CSGS		ACTIVATED LITE OFF		
			SPDS		C14-628 PS 1 BATTERY ON LITE OFF		
			MEPE		PS 1 BAT EN LITE OFF	GC5140	
			MEPS		PS 1 BAT EN LITE OFF	GC5140	
		09-117	MEPS	SPDS	C14-628 (PS 1) VERIFY/SET --- FEEDER BUS A SW - REMOTE		
					C14-205 LEM SW - REMOTE		
		09-118	MEPS	CSGS	MSS/CSM ACE BUS - OFF MSS/LEM ACE BUS - OFF		
			CSGS		ACTIVATED LITE OFF		
			MEPE		PS 1 GSE BUS B ON LITE OFF	GC5142	10C24

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		09-119	MEPS	CSGS	MSS ACE PS OUTPUT - OFF	
			CSGS		ACTIVATED LITE OFF	
			SPUS		C14-626 PS 1 DC OUTPUT POWER ON LITE OFF	
			MEPE		PS 1 OUTPUT ON LITE OFF	GC5138 10C22
			MEPS		PS 1 OUTPUT ON LITE OFF GSE BUS PS 1 IS 0+2-0 (P2-23)	GC5138 10C22 GC5149
		09-120	MEPS	CSGS	MSS ACE PS INPUT - OFF	
			CSGS		INPUT LITE OFF	
		09-121	MEPS	MACE	EXECUTE THE FOLLOWING..	
					DCBA R114 1011	
		09-122	MEPS	SFET	C14-268 POWER SW - OFF	
					C14-240 DC PWR - 12V SW - OFF DC PWR +6V SW - OFF DC PWR +12V SW - OFF DC PWR +28V SW - OFF AC PWR SW - OFF	
			SFET		-12 DC PWR LITE OFF +6V DC PWR LITE OFF +12V DC PWR LITE OFF +28V DC PWR LITE OFF AC PWR LITE OFF	
					C14-590 PANEL PWR SW - OFF MAIN PWR CB 1 - OFF	
					C14-484 AM 1 SW - OFF AC SW - OFF	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-123	MTPE	SPAD	1. PROCEED WITH CABLE DISC PER T/S 8.2.5.6.2 AND 8.2.5.6.3	
					2. REPORT WHEN COMPLETE	------ NR QC ------- NASA QC
		09-124	MTPE	MECS	PERFORM FACILITY GAS MIXTURE (60/40) VERIFICATION PER SEQ 05V2.	
-13 45		09-125			SILO 4 OPEN (SUPPORT)	
-13 00		09-126	MTPE	SPAD	REMOVE MIRROR COVERS PER T/S 8.2.5.1.3 REPORT COMPLETION.	------ NR QC ------- NASA QC
-12 45		09-127	SPAD	MTPE	CREW SYS STOWAGE COMPLETE.	
		09-128	MTPE	MSCL MSCR	RECORDER 17 1/4 2/X 3/1 4/X 5/3 6/1 7/3 8/1 RECORDER 19 1/4 2/4 3/1 4/X 5/3 6/1 7/3 8/1	
					CAUTION RCS ENGINES ARE CONNECTED. AUTO RCS SELECT SWITCHES (16) ON PANEL 8 SHALL REMAIN OFF UNTIL AFTER PRIME CREW INGRESS.	
		09-129	MTPE	SCDR	PANEL 8 SCS TVC AC1 CB - CLOSE 008C055 AC1 CB - CLOSE 008C009 AC2 CB - CLOSE 008C010 ECA/TVC AC2 CB - CLOSE 008C054 DIRECT ULL MNA CB - OPEN (GUARDED) 008C072 MNB CB - OPEN (GUARDED) 008C073	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-123	MTPE	SPAD	1. PROCEED WITH CABLE DISC PER T/S 8.2.5.6.2 AND 8.2.5.6.3	
					2. REPORT WHEN COMPLETE	------ ------- NR QC NASA QC
		09-124			(DELETED)	*1
-13 45		09-125			SILO 4 OPEN (SUPPORT)	
-13 00		09-126	MTPE	SPAD	REMOVE MIRROR COVERS PER T/S 8.2.5.1.3 REPORT COMPLETION.	------ ------- NR QC NASA QC
-12 45		09-127	SPAD	MTPE	CREW SYS STOWAGE COMPLETE.	
		09-128	MTPE	MSCL MSCR	RECORDER 17	
					1/4 2/X 3/1 4/X 5/3 6/1 7/3 8/1	
					RECORDER 19	
					1/4 2/4 3/1 4/X 5/3 6/1 7/3 8/1	
					CAUTION RCS ENGINES ARE CONNECTED. AUTO RCS SELECT SWITCHES (16) ON PANEL 8 SHALL REMAIN OFF UNTIL AFTER PRIME CREW INGRESS.	
		09-129	MTPE	SCDR	PANEL 8	
					SCS TVC AC1 CB - CLOSE 008C055 AC1 CB - CLOSE 008C009 AC2 CB - CLOSE 008C010 ECA/TVC AC2 CB - CLOSE 008C054 DIRECT ULL MNA CB - OPEN (GUARDED) 008C072 MNB CB - OPEN (GUARDED) 008C073	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-129			CONTR/DIRECT		
					1 MNA CB - CLOSE	008C013	
					1 MNB CB - CLOSE	008C014	
					2 MNA CB - CLOSE	008C070	
					2 MNB CB - CLOSE	008C071	
					A/C ROLL		
					MN A CB - CLOSE	008C015	
					MN B CB - CLOSE	008C016	
					B/D ROLL		
					MN A CB - CLOSE	008C017	
					MN B CB - CLOSE	008C018	
					PITCH		
					MN A CB - CLOSE	008C019	
					MN B CB - CLOSE	008C020	
					YAW		
					MN A CB - CLOSE	008C021	
					MN B CB - CLOSE	008C022	
					ORDEAL		
					AC2 CB - CLOSE	008C065	
					MNB CB - CLOSE	008C064	
					SCS		
					CONTR/AUTO		
					MNA CB - CLOSE	008C074	
					MNB CB - CLOSE	008C075	
					LOGIC BUS		
					1/2 MNA CB - CLOSE	008C063	
					3/4 MNA CB - CLOSE	008C023	
					1/4 MNB CB - CLOSE	008C062	
					2/3 MNB CB - CLOSE	008C024	
					SYS		
					MNA CB - CLOSE	008C011	
					MNB CB - CLOSE	008C012	
					EMS		
					MNA CB - CLOSE	008C052	
					MNB CB - CLOSE	008C053	
					SPS		
					PITCH 1 BAT A CB - OPEN	008C031	
					PITCH 2 BAT B CB - OPEN	008C032	
					YAW 1 BAT A CB - OPEN	008C033	
					YAW 2 BAT B CB - OPEN	008C034	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		09-129			CONTR/DIRECT	
					1 MNA CB - CLOSE	008C013
					1 MNB CB - CLOSE	008C014
					2 MNA CB - CLOSE	008C070
					2 MNB CB - CLOSE	008C071
					A/C ROLL	
					MN A CB - CLOSE	008C015
					MN B CB - CLOSE	008C016
					B/D ROLL	
					MN A CB - CLOSE	008C017
					MN B CB - CLOSE	008C018
					PITCH	
					MN A CB - CLOSE	008C019
					MN B CB - CLOSE	008C020
					YAW	
					MN A CB - CLOSE	008C021
					MN B CB - CLOSE	008C022
					ORDEAL	
					AC2 CB - CLOSE	008C065
					MNB CB - CLOSE	008C064
					SCS	
					CONTR/AUTO	
					MNA CB - CLOSE	008C074
					MNB CB - CLOSE	008C075
					LOGIC BUS	
					1/2 MNA CB - CLOSE	008C063
					3/4 MNA CB - CLOSE	008C023
					1/4 MNB CB - CLOSE	008C062
					2/3 MNB CB - CLOSE	008C024
					SYS	
					MNA CB - CLOSE	008C011
					MNB CB - CLOSE	008C012
					EMS	
					MNA CB - CLOSE	008C052
					MNB CB - CLOSE	008C053
					SPS	
					PITCH 1 BAT A CB - OPEN	008C031
					PITCH 2 BAT B CB - OPEN	008C032
					YAW 1 BAT A CB - OPEN	008C033
					YAW 2 BAT B CB - OPEN	008C034

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARK
		09-130	MTPE	SCDR	PANEL 7	
					FDAI/GPI PWR SEL - OFF 007S003	
					SCS	
					ELEC PWR SEL - ECA 007S005	
					BMAG PWR	
					1 SEL - OFF 007S006	
					2 SEL - OFF 007S007	
					SCS	
					TVC SERVO PWR	
					1 SW - OFF 007S008	
					2 SW - OFF 007S009	
					LOGIC PWR 2/3 SW - ON (UP) 007S010	
					SIG COND/DR BIAS PWR	
					1 SW - AC1 007S011	
					2 SW - AC2 007S012	
		09-131	MTPE	SCDR	PANEL 2	
					C/W NORMAL SW - NORMAL 002S007	
					NOTE	
					TO PREVENT EXCESSIVE TEMP OF THE C/W LIGHTS THE C/W NORMAL SW WILL BE PLACED TO THE ACK POSITION FOLLOWING VERIFICATION OF THE BMAG TEMP LITES. THE SWITCH WILL BE PERIODICALLY POSITIONED TO NORMAL TO DETERMINE WHEN THE BMAG TEMP LITES GO OFF.	
		09-132	MTPE	SCDR	PANEL 1	
					TRANS CONTR PWR SW - OFF 001S066	
					ROT CONTR PWR	
					NORM 1 SW - OFF 001S064	
					NORM 2 SW - OFF 001S065	
					DIRECT 1 SW - OFF 001S013	
					DIRECT 2 SW - OFF 001S067	
					PANEL 7	
					BMAG 1 PWR SEL - WARMUP 007S006	
				MSCR	RECORD BMAG 1 WARMUP START TIME -----	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-133	MTPE	SCMP	PANEL 2	
					BMAG 1 TEMP LT ON	
		09-134	MTPE	SCDR	PANEL 1	
					MASTER ALARM LT ON	001S001
					MASTER ALARM - RESET	001S001
		09-135	MTPE	SCDR	PANEL 7	
					BMAG 2 PWR SEL - WARMUP	007S007
				MSCR	RECORD BMAG 2 WARMUP START TIME -----	
		09-136	MTPE	SCMD	PANEL 2	
					BMAG 2 TEMP LT ON	
		09-137	MTPE	SCDR	PANEL 1	
					MASTER ALARM LT ON	001S001
					MASTER ALARM - RESET	001S001
		09-138	MTPE	SCDR	PANEL 7	
					FDAI/GPI PWR SEL - BOTH	007S003
		09-139	MTPE	MSCL	RECORD SCS NULL VOLTAGE FOR ENGINEERING INFORMATION ONLY.	
				MSCL	ROLL AT ER DEG. (P17-2) -----	CH3502
					PITCH AT ER DEG. (P17-2) -----	CH3500
					YAW AT ER DEG. (P17-2) -----	CH3501
					ROLL RATE DG/S (P17-3) -----	CH3505
					PITCH RATE DG/S (P17-3) -----	CH3503
					YAW RATE DG/S (P17-3) -----	CH3504

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARK
		09-140	MTPE	MSCR	SCS CONT MODE LITE ON	CH3607
					GYRO 1 SMRD LITE ON	CH3623
					GYRO 2 SMRD LITE ON	CH3624
					ATT DB MIN LITE ON	CH3588
					ROLL BMAG RATE 2 LITE ON	CH3636
					PITCH BMAG RATE 2 LITE ON	CH3639
					YAW BMAG RATE 2 LITE ON	CH3642
					LIMIT CYCLE ON LITE OFF	CH3606
		09-141	MTPE	SCMP	PANEL 2	
					REPORT WHEN BMAG TEMP LITES GO OFF	
				SCMP	BMAG 1 TEMP LITE OFF	
				MSCL	RECORD TIME -----	
				SCMP	BMAG 2 TEMP LITE OFF	
				MSCL	RECORD TIME -----	
					BMAG 1 WARM-UP TIME MIN -----	1 HR MAX
					BMAG 2 WARM-UP TIME MIN -----	1 HR MAX
					NOTE SCS SYSTEMS BMAG 1 AND BMAG 2 SHALL REMAIN IN WARM-UP UNTIL PRIME CREW INGRESS.	
		09-142	MTPE	SCDR	PANEL 2	
					C/W NORMAL SW - ACK	002S007

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-12 20		09-143			SILO 3 BREAKUP START (SUPPORT)	
		09-144	MTPE	SNQC SGQC	REPORT SLA INT INSPECT COMPLETE (T/S 8.2.4.5.10) NR QC NASA QC	
		09-145	MTPE	SPAD	START CLEARING NON-ESSENTIAL PERSONNEL.	
		09-146	MTPE	SNQC SGQC	REPORT COMPLETION OF T/S 8.2.5.6.5 (FACILITY SHAKEDOWN INSPECT) NR QC NASA QC	
		09-147	MTPE	SNQC SGQC	PROCEED WITH LUT/PAD INSPECT PER T/S 8.2.5.5.1	
		09-148	MTPE	SPAD	VERIFY READY FOR MSS W/R DOOR INSTALLATION	
		09-149	MSTC	CVTS	CLEAR FOR MSS W/R DOOR LOCK INSTALLATION	
-12 15		09-149A	CVTS	MSTC	MSS POWER TRANSFER TO OCCUR AT THIS TIME. *1	
		09-150	MSTC	CLTC	VERIFY READY FOR FPI CALS. SEND V2MS AND V4MS TO CH212.	
		09-151	MTPE	SCDR	PANEL 8	
					EDS	
					1 CB - CLOSE	008C049
					2 CB - CLOSE	008C050
					3 CB - CLOSE	008C051
					PANEL 1	
					LV/SPS IND SII/SIVB SW - SII/SIVB	001S053
					LV TK PRESS S-II FUEL (LH) IND PSI ----- (RH) IND PSI -----	
					LV TK PRESS S-IVB FUEL (LH) IND PSI ----- (RH) IND PSI -----	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-151			NOTE	
					MSTC OBTAIN FOLLOWING READINGS FROM V2MS AND V4MS CH 212 AT T-12 15	
					S-II FUEL TANK PRESS FUEL ULLAGE EDS NO. 1 _____ FUEL ULLAGE EDS NO. 2 _____	
					S-IVB FUEL TANK PRESS FUEL ULLAGE EDS NO. 1 _____ FUEL ULLAGE EDS NO. 2 _____	
					NOTE	
					THE READINGS OBTAINED IN THE CM SHALL COMPARE WITH THE VALUES OBTAINED FROM THE LV WITHIN THE FOLLOWING TOLERANCES.. S-II FUEL +/- 3.1 PSI S-IVB FUEL +/- 3.0 PSI	
		09-152	MTPE	SCDR	PANEL 8	
					EDS 1 CB - OPEN 008C049 2 CB - OPEN 008C050 3 CB - OPEN 008C051	
					PANEL 1	
					LV/SPS IND S-II/S-IVB SW - GPI	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
-12 15		09-153	CVTS	MSTC	SM ECS AIR GOING TO FULL FLOW	
		09-154	MTPE	SPAD	1. PROCEED WITH T/S 8.2.5.6.6 (PRE-CREW INGRESS INSPECT) 2. PROCEED WITH T/S 8.2.6.1.1 (MATCH CLOSEOUT INSPECT)	
		09-155	MTPE	SCMP	PANEL 226 NUM/INTG LTG LEB AC2 226C033 CB - CLOSE NUM/INTG LTG LMDC AC1 226C037 CB - CLOSE PANEL 100 LEB NUMERICS LT CONT - AS REQ'D FOR MIN ACCEPTABLE LIGHTING.	
		09-156	MTPE	SCDR	PANEL 8 INT NUMERIC LT CONT - AS REQ'D FOR MIN ACCEPTABLE LIGHTING.	
				MEPE	HRS _____ MIN _____ SEC _____	
		09-157	MTPE	SCMP	PANEL 229 TIMERS MN A CB - CLOSE 229C040 MN B CB - CLOSE 229C041 PANEL 1 EVENT TIMER START SW - STOP, THEN CENTER. EVENT TIMER RESET SW - RESET, REL EVENT TIMER IND ALL ZEROES PANEL 2 MSN TIMER SW - RESET, REL MSN TIMER IND ALL ZEROES MSN TIMER SW - START MSN TIMER IND COUNTING UP	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARK
		09-158	MTPE	SLMP	PANEL 306 EVENT TIMER START SW - STOP, THEN CENTER. EVENT TIMER RESET SW - RESET, REL TIMER IND ALL ZEROES MSN TIMER SW - RESET, REL MSN TIMER IND ALL ZEROES MSN TIMER SW - START MSN TIMER IND COUNTING UP	
		09-159	MTPE	SCMP	PANEL 306 EVENT TIMER START SW - STOP, THEN CENTER MISSION TIMER SW - STOP PANEL 2 MSN TIMER SW - STOP	
		09-160	MTPE	MEPS	PERFORM BATTERY CHECK	
		09-161	MEPS	SCMP	PANEL 250.. PYRO A SEQ A CB - CLOSE 250C016 PYRO B SEQ B CB - CLOSE 250C017	
				SLMP	PANEL 3 BAT A VOLTAGE ____ VDC 35.5 +/- 2.5 VDC BAT B VOLTAGE ____ VDC 35.5 +/- 2.5 VDC BAT C VOLTAGE ____ VDC 35.5 +/- 2.5 VDC PYRO BAT A ____ VDC 35.5 +/- 2.5 PYRO BAT B ____ VDC 35.5 +/- 2.5	
		09-162	MEPS	SCMP	PANEL 250.. PYRO A SEQ A CB - OPEN 250C016 PYRO B SEQ B CB - OPEN 250C017	
				MEPS	BAT A VOLTAGE ____ VDC (P1-11) CC0210 35.5 +/- 2.5 BAT B VOLTAGE ____ VDC (P1-11) CC0211 35.5 +/- 2.5	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-163	MEPS	MTPE	BATTERY CHECK COMPLETE	
-12	05	09-164	CVTS	MSTC	MSS PLATFORM OBSERVERS ARE TO REPORT TO PVTS AT T-11 45 AT MSS BASE LOW RISE ELEVATOR. NOTE FOLLOWING PERSONNEL REQUIRED FOR MSS MOVE. HEADSETS ARE REQ'D FOR COMM CHECK AT T-1100. NR TECHS - 3 - MSS OBSERVERS NR TECH - SORC - MSS -22 FT. LEVEL (K-BTL PURGE - S14-0571 S14-064) NR QC - SNQC - MSS -22 FT LEVEL	
-12	00	09-165	MTPE		NOTIFY BACKUP CREW TO REPORT ON STATION	
-11	30	09-166	CVTS	MSTC	VERIFY READY TO MAINTAIN RF SILENCE AND CONTROLLED SWITCHING ACROSS THE LV/SC INTERFACE. NOTE RF SILENCE TO END AT T-10 45. CVTS WILL NOTIFY.	
-11	00	09-167	CVTS	MSTC	VERIFY READY FOR AUX DAMPER DISC.	
		09-168	SPAD	MTPE	BACKUP CREW ON STATION.	
		09-169	MTPE	SPAD	1. VERIFY T/S 8.2.5.6.6 (PRE-CREW INGRESS INSPECT) COMPLETE. ------ ------ NR QC NASA QC 2. VERIFY T/S 8.2.6.1.1 (HATCH C/O INSPECT) COMPLETE. ------ ------ NR QC NASA QC	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-170	MTPE	SCMP	INGRESS L.H. COUCH	
		09-171	MTPE	SLMP	INGRESS R.H. COUCH	
		09-171A	CVTS	MSTC	VERIFY ALL MSS PREPS FOR MOVE ARE COMPLETE AND OBSERVERS ON STATION.	*1

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-171			NOTE DAMPER CHANGEOVER AT 1045 AND 1010	
		09-172	MTPE	SCMP SLMP	OBTAIN 3 (EA.) TRAINING ASTRO HEADSETS FROM SPAD AND CONNECT TO CWG ADAPTERS (P1). LAY HEADSETS ASIDE.	
					NOTE THE FOLLOWING CM OPERATIONS WILL BE PERFORMED BY SCMP AND SLMP (BACK-UPS). CALLS TO SCDR ARE REFERENCED TO THE LEFT HAND COUCH STATION.	
		09-173	MTPE	SCMP	PANEL 2	
					C/W NORMAL SW - NORMAL	002S007
					C/W CSM SW - CSM	002S008
					C/W PWR SW - 2	002S009
					TAKE STATUS OF C/W LITES	
				SCDR	PANEL 1	
					MASTER ALARM LITE ON	
				SLMP	PANEL 3	
					MASTER ALARM LITE ON	
				SCMP	PANEL 122	
					MASTER ALARM LITE ON	
					MASTER ALARM PB - RESET	
		09-174	MTPE	SCMP	PANEL 2	
					C/W PWR SW - 1	
				SCDR	PANEL 1	
					MASTER ALARM LITE ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-174		SLMP	PANEL 3	
					MASTER ALARM LITE ON	
				SCMP	PANEL 122	
					MASTER ALARM LITE ON MASTER ALARM PB - RESET	
		09-175	MTPE	SCMP	PANEL 2	
					C/W LAMP TEST SW - 1, HOLD	002S079
			SCMP		L.H. CW LITES (LABELED) ON C/W NORMAL SW - BOOST	002S007
			SCDR		PANEL 1	
					MASTER ALARM LITE OFF	
		09-176	MTPE	SCMP	PANEL 2	
					C/W NORMAL SW - NORMAL	002S007
			SCDR		PANEL 1	
					MASTER ALARM LITE ON	
		09-177	MTPE	SCMP	PANEL 2	
					C/W LAMP TEST SW - 2, HOLD	002S079
			SCMP		L.H. C/W LITES (LABELED) OFF (EXCEPT LITES ON DURING STATUS) R.H. C/W LITES (LABELED) ON	
			SCDR		PANEL 1	
					MASTER ALARM LITE OFF	
			SLMP		PANEL 3	
					MASTER ALARM LITE ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-178	MTPE	SCMP	PANEL 2		
					C/W LAMP TEST SW - REL	002S079	
				SCMP	R.H. C/W LITES (LABELED) OFF (EXCEPT LITES ON DURING STATUS)		
				SLMP	PANEL 3		
					MASTER ALARM LITE OFF		
		09-179	MTPE	SCMP	PANEL 2		
					C/W NORMAL SW - ACK	002S007	
					EMS PRELAUNCH TEST ----------		
					(5/32 IN HEX DRIVER REQUIRED)		
		09-180	MTPE	SCDR	PANEL 1		
					EMS FUNCTION SEL SW - OFF		
					PANEL 8		
					EMS MN A CB - CLOSE	008C052	
					EMS MN B CB - CLOSE	008C053	
					PANEL 1		
					OPEN EMS GTA COVER		
					EMS GTA SW - (UP)	001A103	
					EMS MODE SW - STBY	001A102	
					EMS FUNCTION SEL - DV	001A101	
					NOTE		
					WAIT 5 SEC		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		09-181	MTPE	SCDR	EMS MODE Sw - NORMAL	001A102
					EMS GTA NUL ADJUSTMENT - ADJUST UNTIL EMS RANGE-DV IND LEAST SIGNIFICANT DIGIT CHANGES LESS THAN 1 UNIT IN 10 SEC INTERVAL.	
					EMS FUNCTION SEL - DV SET/ VHF RNG	001A101
					EMS DV/EMS SET SW - SLEW EMS RANGE/DV IND TO +1586.8	
					EMS FUNCTION SEL - DV TEST	001A101
				SCDR	EMS SPS THRUST LITE ON	
					EMS RANGE/DV IND DECREASES (10 SEC)	
					EMS SPS THRUST LITE OFF (AT DV APPROX -0.1 FPS)	
					EMS RANGE/DV IND - STOPS AT -20.8 +/- 20.7 FPS	
		09-182	MTPE	SCDR	EMS MODE SW - STBY	001A102
					EMS FUNCTION SEL - EMS TEST 1	001A101
					NOTE	
					WAIT 5 SEC	
					EMS MODE SW - NORMAL	001A102
					NOTE	
					WAIT 10 SEC	
				SCDR	EMS .05 G LITE OFF	
					EMS SPS THRUST LITE OFF	
					(EMS RSI LOWER) LITE OFF	
					(EMS RSI UPPER) LITE OFF	
					EMS RANGE/DV IND 0.0	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		09-183	MTPE	SCDR	SLEW (EMS) G-V SCROLL UNTIL DISPLAY INDEX IS SUPERIMPOSED UPON NOTCH IN NEXT SELF-TEST PATTERN.	
					RECORD SELF TEST PATTERN NO. _____	
					EMS FUNCTION SEL - EMS TEST 2 001A101	
			SCDR		EMS .05 G LITE ON	
					NOTE	
					WAIT 10 SEC	
					ALL OTHER EMS LITES OFF	
		09-184	MTPE	SCDR	EMS FUNCTION SEL - EMS TEST 3 001A101	
			SCDR		EMS .05 G LITE ON	
					NOTE	
					WAIT 10 SEC	
					EMS RSI LOWER LITE ON	
		09-185	MTPE	SCDR	EMS DV-EMS SET SW - SLEW EMS RANGE/DV IND TO 58 +/- 0.0 NM	
					EMS FUNCTION SEL - EMS TEST 4 001A101	
			SCDR		EMS .05 G LITE ON	
					ALL OTHER EMS LITES OFF	
					EMS G-V SCROLL TRACE WITHIN TEST PATTERN FOR 10 SEC, THEN STOPS IN LOWER RIGHT CORNER.	
					EMS RANGE/DV IND COUNTS TOWARD ZERO FOR 10 SEC, THEN STOPS AT 0.0 +/- 0.2.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARK
		09-186	MTPE	SCDR	EMS FUNCTION SEL - EMS TEST 5	001A101
			SCDR		EMS .05 G LITE ON	
					NOTE	
					WAIT 10 SEC	
					EMS RSI UPPER LITE ON EMS RANGE/DV IND 0.0	
					EMS G-V SCROLL SCRIBE TRACES VERTICAL LINE APPROX 9 G TO 0.22 +/- 0.1 G AND STOPS (TRACE WITHIN TEST PATTERN)	
		09-187	MTPE	SCDR	EMS FUNCTION SEL - RNG SET	001A101 001A102
			SCDR		EMS G-V SCROLL SCRIBE TRACES VERTICAL LINE FROM 0.22 G TO 0 +/- 0.1 G AND STOPS.	
		09-188	MTPE	SCDR	EMS MODE SW - STBY	
			SCDR		ALL EMS LITES OFF	
		09-189	MTPE	SCDR	EMS FUNCTION SEL - OFF	001A101
					EMS GTA SW - (DOWN)	001A103
					CLOSE GTA COVER	
		09-190	MTPE	SCMP	PANEL 377	
					GLY TO RAD SEC VLV - NORMAL	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		09-191	MTPE	SLMP	PANEL 2		
					ECS IND SEL - SEC	002S089	
					SEC COOL LOOP PUMP SW - AC1	002S054	
					TIME		
					ECS RAD TEMP PRIM/SEC IN IND DEG. F		
					ECS RAD TEMP SEC OUT IND DEG. F		
					GLY EVAP TEMP OUT IND DEG. F		
					GLY EVAP STEAM PRESS IND PSIA		PEG HIGH
					GLY DISCH PRESS IND PSIG		60 MAX
					ACCUM PRIM/SEC QTY PCNT		
					SEC COOL LOOP PUMP SW - AC2	002S054	
					GLY DISCH PRESS IND PSIG		60 MAX
					SEC COOL LOOP PUMP SW - (OFF-CENTER)	002S054	
					TIME		
					ECS IND SEL - PRIM	002S089	
		09-192	MTPE	SCMP	PANEL 377		
					GLY TO RAD SEC VLV - BYPASS		
		09-193	MTPE	SLMP	PANEL 2		
					GLY DISCH PRESS IND PSIG		60 MAX
					ACCUM PRIM/SEC QTY IND PCNT		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARK
		09-193			PANEL 4		
					ECS GLY PUMPS SEL - 1 AC1	004S002	
					TIME ----------		
					PANEL 2		
					GLY DISCH PRESS IND PSIG -----		60 MAX
					ECS RAD FLOW CONT PWR SW - PWR	002S085	
					ECS RAD FLOW CONT AUTO SW - 2	002S084	
					ECS RAD TB - 2		
					ECS RAD FLOW CONT AUTO SW - 1	002S084	
					WAIT 20 SEC - THEN AUTO		
					ECS RAD TB - GRAY		
					ECS RAD FLOW CONT PWR SW - (CENTER)	002S085	
		09-194	MTPE	SCDR	PANEL 7		
					DIRECT 02 VLV - CLOSE CW		
				SLMP	PANEL 2		
					02 FLOW IND LB/HR -----		
		09-195	MTPE	SLMP	PANEL 3		
					AC BUS 2 RESET SW - OFF	003S067	
			MEPE		HR MIN SEC ----- ----- -----		
		09-196	MTPE	SLMP	PANEL 3		
					INV 3 SW - MNB	003S059	
					INV 2 AC BUS 2 SW - OFF	003S065	
					INV 3 AC BUS 2 SW - (ON-UP)	003S066	
					AC BUS 2 RESET SW - RESET, REL	003S067	
					REL		
					MASTER ALARM LITE ON		
					MASTER ALARM PB - RESET		

TIME	COMM CM	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-196	SLMP		AC BUS 2	
					PH A _____ VAC	115 +/- 5
					PH B _____ VAC	115 +/- 5
					PH C _____ VAC	115 +/- 5
		09-197	MTPE	SLMP	PANEL 3	
					AC BUS 2 RESET SW - OFF 003S067 INV 3 AC BUS 2 SW - OFF 003S066 INV 2 AC BUS 2 SW - (ON-UP) 003S065 AC BUS 2 RESET SW - RESET, REL 003S067 REL	
					MASTER ALARM LITE ON MASTER ALARM PB - RESET INV 3 SW - OFF	
			MEPE		HR _____ MIN _____ SEC _____	
			SLMP		AC BUS 2	
					PH A _____ VAC	115 +/- 5
					PH B _____ VAC	115 +/- 5
					PH C _____ VAC	115 +/- 5
		09-198	MSTC	HFLT	STAND BY FOR BATTERY STATUS.	
		09-199	MSTC	MEPS	GIVE STATUS OF ENTRY/POST LANDING BATTERIES SINCE FULL CHARGE.	
			MEPS		BAT A _____ AMP HRS REMOVED (APPROX)	
					BAT B _____ AMP HRS REMOVED (APPROX)	
					BAT C _____ AMP HRS REMOVED (APPROX)	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMA
-10 30		09-200	CVTS	MSTC	VERIFY READY FOR PRIMARY DAMPER CONNECT IN 20 MIN.	
		09-201	MSTC	MTPE SCMP MNQC	PERFORM LEB CLOSEOUT SWITCH LIST ON CH 222. REPORT COMPLETION	
					NOTE ALL SYSTEMS MONITOR	
					NOTE 5/32 IN. ALLEN WRENCH REQUIRED FOR SWITCH LIST.	
		09-202	MTPE	SCMP	PANEL 377 --------- GLY TO RAD SEC VLV - BYPASS	
		09-203			PANEL 379 --------- PRIM ACCUM FILL VLV - OFF	
		09-204			PANEL 378 --------- PRIM GLY ACCUM VLV -(OPEN- CCW)	*1
		09-205			PANEL 382 --------- OPEN COVER SUIT HT PRIM GLY VLV - FLOW SUIT FLOW RELF VLV - OFF PRIM GLY EVAP IN TEMP VLV - MIN SUIT HT SEC GLY VLV - FLOW EVAP H2O CONT PRIM VLV - OFF SEC VLV - OFF H2O ACCUM 1 VLV - OFF 2 VLV - OFF CLOSE COVER EXTEND Y -Y STRUT AND LOCK IN PLACE	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-206			PANEL 350 --------- OPEN COVER C02 CANISTER DIVERT VLV - (CENTER) CLOSE COVER	
		09-207			PANEL 351 --------- MAIN REG A VLV - OPEN B VLV - OPEN H2O/GLY TK PRESS REG VLV - BOTH RELF VLV - BOTH EMER CABIN PRESS VLV - OFF CABIN REPRESS VLV - OFF (CCW)	
		09-208			PANEL 352 --------- WASTE TK SERVICING VLV - CLOSE PRESS RELF VLV - 2 POT TK IN VLV - CLOSE WASTE TK IN VLV - AUTO	
		09-209			FWD HATCH --------- PRESS EQUALIZATION VLV - CLOSE	
		09-210			PANEL 12 -------- TUNNEL VENT VLV - LM/CM UP LM/CM PRESS DIFF IND 0.0 PSI	*1
		09-211			PANEL 301 --------- SUIT FLOW VLV - FULL FLOW	
		09-212			PANEL 300 --------- SUIT FLOW VLV - FULL FLOW	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMA
		09-213			PANEL 302 --------- SUIT FLOW VLV - FULL FLOW CABIN HEAT EXCH LOUVERS - CENTERLD	
		09-214			PANEL 303 --------- PRIM CAB TEMP VLV - C (CW) SEC CAB TEMP VLV - MAX COOL	
		09-215			PANEL 304 --------- DRNK H2O SUPPLY VLV - OFF DRINK GUN SW - LOCK CLOSED	
		09-216			PANEL 100 --------- UTIL PWR SW - OFF 100S006 FLOOD DIM SW - 1 100S005 FIXED SW - OFF 100S004 G/N PWR OPTICS SW - OFF 100S001 IMU SW - (ON-UP) 100S002 RNDZ XPNDR SW - OFF 100S003 LEB LT NUMERICS CONT - AS REQ'D INTGL CONT - OFF FLOOD CONT - OFF	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-217			PANEL 306		
					MSN TIMER SW - RESET, REL	306S005	
					MSN TIMER IND ZERO		
					MSN TIMER SW - START	306S005	
					MSN TIMER IND COUNTING UP		
					MSN TIMER		
					HRS SW - CENTER	306S006	
					MIN SW - CENTER	306S007	
					SEC SW - CENTER	306S008	
					EVENT TIMER		
					START SW - STOP THEN (CENTER)	306S001	
					RESET SW - RESET, REL IND ZERO	306S002	
					MIN SW - CENTER	306S003	
					SEC SW - CENTER	306S004	
		09-218			PANEL 101		
					SYS TEST SEL (LH) - 5	101S001	
					SYS TEST SEL (RH) - A	101S002	
					SYS TEST IND VDC		1.5 -2.3 (60-92 DEG)
					SYS TEST SEL (LH) - 4	101S001	
					SYS TEST SEL (RH) - B	101S002	
					RNDZ XPNDR SW - OPERATE	101S006	
					CM RCS HTRS SW - OFF	101S003	
					WASTE H2O DUMP SW - HTR A	101S005	
					URINE DUMP SW - HTR A	101S004	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-219			PANEL 122	

					OPTICS	
					ZERO SW - ZERO	122S003
					TELE TRUN SW - SLAVE TO SXT	122S001
					MODE SW - MAN	122S002
					COUPLING SW - DIRECT	122S004
					SPEED SW - LO	122S005
					CONDITION LAMPS SW - ON	122S012
					UP TLM SW - ACCEPT	122S010
					SXT HAND CONTR (OHC) - NEUTRAL	
					RETICLE BRIGHTNESS TW - AS REQD	
					ATT IMP CONT - NEUTRAL	122S008
					MARK PB - AS IS	122S006
					MARK REJECT PB - AS IS	122S007
		09-220			PANEL 180	

					S-BND SQ SW - ENABLE	180S001
		09-221			PANEL 225	

					ALL CB'S - CLOSED EXCEPT..	
					HI GAIN ANT	
					FLT BUS CB - OPEN	225C005
					GRP 2 CB - OPEN	225C006
		09-222			PANEL 226	

					ALL CB'S - CLOSED EXCEPT..	
					FC 1 REACS CB - OPEN	226C004
					FC 2 REACS CB - OPEN	226C005
					FC 3 REACS CB - OPEN	226C006
					FC 1 RAD CB - OPEN	226C013
					FC 2 RAD CB - OPEN	226C014
					FC 3 RAD CB - OPEN	226C015
					LTG COAS/TUNNEL	
					MNA CB - CLOSE	226C028
					MNB CB - OPEN	226C029

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-223			PANEL 229	
					ALL CB'S CLOSED EXCEPT..	
					MAIN REL	
					PYRO A CB - OPEN	229C048
					PYRO B CB - OPEN	229C049
					O2 VAC ION PUMPS	
					MN A CB - OPEN	229C050
					MN B CB - OPEN	229C051
		09-224			PANEL 250	
					CAUTION	
					PYRO A AND B TIE TO BAT BUS A AND B CB'S (2) SHOULD NEVER BE CLOSED WHEN PYRO A AND B SEQ A AND B CB'S (2) ARE CLOSED. LOSS OF PYRO BATTERY POWER COULD RESULT.	
					ALL CB'S - CLOSED EXCEPT..	
					PYRO A BAT A TO PYRO BUS TIE CB - OPEN	250C018
					PYRO B BAT B TO PYRO BUS TIE CB - OPEN	250C019
					BAT C TO BAT BUS A CB - OPEN	250C015
					BAT C TO BAT BUS B CB - OPEN	250C024
		09-225			PANEL 251	
					OVBD DRAIN VLV - OFF	
		09-226			PANEL 252	
					BAT VENT VLV - CLOSED	
					WASTE STOWAGE VLV - VENT	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		09-227	MTPE	MSTC	LEB CLOSEOUT SWITCH LIST COMPLETE	
		09-228	MTPE	SCMP	MOVE TO LH COUCH.	
		09-229	MTPE	MTPE SCDR SLMP MNQC	PERFORM MDC SWITCHLIST ON CH 222. REPORT COMPLETION.	
					NOTE ALL SYSTEMS MONITOR	
		09-230	MTPE	SCDR	PANEL 601 --------- REPRESS 02 VLV - CLOSE	
		09-231			PANEL 13 -------- FDAI 1 SW - INRTL 013S004 FDAI 2 SW - INRTL 013S005 EARTH/LUNAR SW - PWR OFF 013S001 ALT SET CONT - 100 (APPROX) LTG SW - OFF 013S006 MODE SW - HOLD/FAST 013S002 SLEW SW - (OFF-CENTER) 013S003	
		09-232			THC - NEUTRAL AND LOCKED ---	
		09-233			RHC 2 - LOCKED -----	
		09-234			PANEL 375 --------- SURGE TK PRESS RELF VLV - AUTO (OPEN)	
		09-235			PANEL 376 --------- PLVC SW - NORMAL 376S002	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-236			PANEL 380 --------- 02 DEMAND REG VLV - BOTH SUIT TEST VLV - OFF SUIT RET AIR VLV - PUSH CLOSE	
		09-237			PANEL 325 --------- PRIM GLY TO RAD VLV - (PUSH - NORMAL) CABIN RELIEF VLV (LH) - BOOST ENT CABIN RELIEF VLV (RH) - BOOST ENT (SAFETY LATCH OFF)	
		09-238			PANEL 326 --------- GLY RSVR IN VLV - OPEN OUT VLV - OPEN BYPASS VLV - CLOSE 02 SM SUPPLY VLV - ON 02 SURGE TK VLV - ON 02 REPRESS PKG VLV - ON	
		09-239			PANEL 15 -------- COAS PWR SW - OFF UTIL PWR SW - OFF PL BCN LT SW - CENTER PL DYE MARKER SW - (OFF-DOWN), GUARDED PL VENT SW - OFF	015S006 015S005 015S003 015S002 015S004
		09-240			PANEL 8 ------- ALL CB'S - CLOSED EXCEPT FOLLOWING.. SECS LOGIC A CB - OPEN LOGIC B CB - OPEN ARM A CB - OPEN ARM B CB - OPEN	 008C003 008C004 008C001 008C002

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-240			SPS	
					PITCH 1 BAT A - OPEN 008C031	
					YAW 1 BAT A - OPEN 008C033	
					8 GUARDED CIRCUIT BREAKERS - OPEN	
					NOTE	
					FOLLOWING BREAKERS ARE GUARDED	
					RCS PROP ISOL	
					MN A CB - OPEN (GUARDED) 008C041	
					MN B CB - OPEN (GUARDED) 008C042	
					SCS DIRECT ULL	
					MN A CB - OPEN (GUARDED) 008C072	
					MN B CB - OPEN (GUARDED) 008C073	
					SPS HE VLV	
					MN A CB - OPEN (GUARDED) 008C029	
					MN B CB - OPEN (GUARDED) 008C030	
					PILOT VLV	
					MN A CB - OPEN (GUARDED) 008C068	
					MN B CB - OPEN (GUARDED) 008C069	
					(PANEL 8 SWITCHES)	
					AUTO RCS SELECT	
					A/C ROLL A1 SW - OFF 008S017	
					A/C ROLL C1 SW - OFF 008S018	
					A/C ROLL A2 SW - OFF 008S019	
					A/C ROLL C2 SW - OFF 008S020	
					B/D ROLL B1 SW - OFF 008S021	
					B/D ROLL D1 SW - OFF 008S022	
					B/D ROLL B2 SW - OFF 008S023	
					B/D ROLL D2 SW - OFF 008S024	
					PITCH A3 SW - OFF 008S025	
					PITCH C3 SW - OFF 008S026	
					PITCH A4 SW - OFF 008S027	
					PITCH C4 SW - OFF 008S028	
					YAW B3 SW - OFF 008S029	
					YAW D3 SW - OFF 008S030	
					YAW B4 SW - OFF 008S031	
					YAW D4 SW - OFF 008S032	
					FLOOD	
					DIM SW - 1 008S012	
					FIXED SW - OFF 008S013	
					FLOAT BAG	
					1 SW - VENT 008S004	
					2 SW - VENT 008S005	
					3 SW - VENT 008S006	
					SECS	
					LOGIC 1 SW - OFF 008S011	
					LOGIC 2 SW - OFF 008S015	
					PYRO ARM A SW - SAFE 008S010	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-240			PYRO ARM B SW - SAFE	008S014	
					INTERIOR LT		
					NUMERICS CONT - AS REQ'D		
					FLOOD CONT - OFF		
					INTGL CONT - OFF		
		09-241			PANEL 7		

					EDS PWR SW - OFF	007S001	
					SCS		
					TVC SERVO PWR 1 SW - OFF	007S008	
					TVC SERVO PWR 2 SW - OFF	007S009	
					FDAI/GPI PWR SEL - BOTH	007S003	
					LOGIC PWR 2/3 SW - (ON-UP)	007S010	
					ELEC PWR SEL - ECA		
					SIG COND/DR BIAS PWR		
					1 SW - AC1	007S011	
					2 SW - AC2	007S012	
					BMAG PWR		
					1 SEL - WARM UP	007S006	
					2 SEL - WARM UP	007S007	
					DIRECT 02 VLV - AS IS		
		09-242			PANEL 1		

					SET ALTIMETER INDEX - 3300		
					EMS FUNCTION SEL - OFF		
					EMS GTA SW - (DOWN) (COVER)		
					EMS GTA NULL ADJ - AS IS		
					EMS MODE SW - STBY		
					EMS DV/EMS SET SW - AS IS		
					CMC ATT SW - IMU	001S002	
					ACCELEROMETER - +1G		
					FDAI		
					SCALE SW - 5/1	001S003	
					SEL SW - 1/2	001S004	
					SOURCE SW - CMC	001S005	
					ATT SET SW - GDC	001S006	
					MAN ATT		
					ROLL SW - RATE CMD	001S007	
					PITCH SW - ACCEL CMD	001S008	
					YAW SW - RATE CMD	001S009	
					LIMIT CYCLE SW - OFF	001S010	
					ATT DEADBAND SW - MIN	001S011	
					RATE SW - HIGH	001S012	
					TRANS CONTR PWR SW - ON-UP	001S066	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-242			ROT CONTR PWR	
					NORM 1 SW - AC/DC	001S064
					NORM 2 SW - AC/DC	001S065
					DIRECT 1 SW - OFF	001S013
					DIRECT 2 SW - OFF	001S067
					SC CONT SW - SCS	001S018
					CMC MODE SW - FREE	001S019
					LV/SPS IND ALPHA SW - ALPHA	001S052
					LV ALPHA/SPS PC IND - ZERO	
					LV/SPS IND SII/SIVB SW - GPI	001S053
					NO AUTO ABORT PB - GUARDED	001S029
					APEX COVER JETT PB - GUARDED	001S030
					LES MOT FIRE PB - GUARDED	001S031
					DROGUE DEPLOY PB - GUARDED	001S032
					CANARD DEPLOY PB - GUARDED	001S033
					MAIN DEPLOY PB - GUARDED	001S034
					CSM/LV SEP PB - GUARDED	001S035
					CM RCS HE DUMP PB - GUARDED	001S060
					BMAG MODE	
					ROLL SW - RATE 2	001S020
					PITCH SW - RATE 2	001S021
					YAW SW - RATE 2	001S022
					SPS THRUST SW - NORMAL	001S023
					DIRECT ULLAGE PB - AS IS	001S024
					THRUST ON PB - AS IS	001S025
					DV THRUST	
					A SW - OFF (GUARDED)	001S026
					B SW - OFF (GUARDED)	001S059
					SPS GMBL	
					PITCH TW - 0	
					YAW TW - 0	
					ATT SET	
					ROLL TW - 162	
					PITCH TW - 90	
					YAW TW - 0	
					GDC ALIGN PB - AS IS	001S037
					SCS TVC	
					PITCH SW - AUTO	001S038
					YAW SW - AUTO	001S039
					SPS GMBL MOT	
					PITCH 1 SW - OFF	001S040
					PITCH 2 SW - OFF	001S041
					YAW 1 SW - OFF	001S042
					YAW 2 SW - OFF	001S043
					DV CG SW - CSM	001S054
					ELS LOGIC SW - OFF, GUARDED	001S044
					ELS AUTO SW - (ON-UP)	001S063

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-242			CM RCS LOGIC SW - OFF	001S046
					CM PRPLNT	
					DUMP SW - OFF, GUARDED	001S047
					PURGE SW - (DOWN) GUARDED	001S048
					IMU CAGE SW - (OFF-DOWN), GUARDED	001S049
					ENTRY	
					EMS ROLL SW - OFF	001S050
					.05G SW - OFF	001S051
					TVC GMBL DR	
					PITCH SW - AUTO	001S027
					YAW SW - AUTO	001S028
					EVENT TIMER	
					START SW - STOP	001S056
					THEN (CENTER)	
					RESET SW - RESET, REL	001S055
					MIN SW - CENTER	001S057
					SEC SW - CENTER	001S058
					IND - 00 00	
		09-243	MTPE	SCDR	PANEL 2 (LH)	
					SUIT CABIN DP IN H20	
					O2 FLOW LB/HR	
					DOCK PROBE	
					EXTD/REL A TB - GRAY	
					EXTD/REL B TB - GRAY	
					EXTD/REL SW - OFF (GUARDED)	002S001
					RETR PRIM SW - OFF	002S002
					RETR SEC SW - OFF	002S003
					EXTERIOR LT	
					RUN/EVA SW - OFF	002S005
					RNDZ SW - OFF (CENTER)	002S114
					TUNNEL LT SW - OFF	002S006
					LM PWR SW - OFF	002S082
					UP TLM	
					CM SW - ACCEPT	002S021
					IU SW - BLOCK	002S115
					SM RCS IND SW - PRPLNT QTY	002S098
					CM RCS PRESS SW - (OFF-DOWN) GUARDED	002S031

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARK
		09-245			SM RCS		
					HE 1		
					A SW - (CENTER)	002S024	
					B SW - (CENTER)	002S025	
					C SW - (CENTER)	002S026	
					D SW - (CENTER)	002S027	
					A TB - BP		
					B TB - BP		
					C TB - BP		
					D TB - BP		
					HE 2		
					A SW - (CENTER)	002S034	
					B SW - (CENTER)	002S035	
					C SW - (CENTER)	002S036	
					D SW - (CENTER)	002S037	
					A TB - BP		
					B TB - BP		
					C TB - BP		
					D TB - BP		
					PRPLNT		
					A SW - (CENTER)	002S047	
					B SW - (CENTER)	002S048	
					C SW - (CENTER)	002S049	
					D SW - (CENTER)	002S050	
					SEC PRPLNT		
					A TB - BP		
					B TB - BP		
					C TB - BP		
					D TB - BP		
					PRIM PRPLNT		
					A TB - BP		
					B TB - BP		
					C TB - BP		
					D TB - BP		
					SEC PRPLNT FUEL PRESS		
					A SW - (CENTER)	002S116	
					B SW - (CENTER)	002S117	
					C SW - (CENTER)	002S118	
					D SW - (CENTER)	002S119	
					RCS IND SEL - SM A	002S028	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		09-245			SM RCS		
					TEMP PKG IND ----- DEG. F		75+/-30
					PRESS HE IND ----- PSIA		LESS THAN 250
					SEC FUEL PRESS IND ----- PSIA		LESS THAN 100
					PRPLNT QTY IND ----- PCNT		LESS THAN 25
					IND SW - HE TK TEMP	002S098	
					HE TK TEMP ----- DEG. F.		
					RCS IND SEL - SM B	002S028	
					SM RCS		
					TEMP PKG IND ----- DEG. F.		75+/-30
					PRESS HE IND ----- PSIA		LESS THAN 250
					SEC FUEL PRESS IND ----- PSIA		LESS THAN 100
					HE TK TEMP ----- DEG. F.		
					IND SW - PRPLNT QTY	002S098	
					PRPLNT QTY IND ----- PCNT		LESS THAN 25
					RCS IND SEL - SM C	002S028	
					SM RCS		
					TEMP PKG IND ----- DEG. F.		75+/-30
					PRESS HE IND ----- PSIA		LESS THAN 250
					SEC FUEL PRESS IND ----- PSIA		LESS THAN 100
					PRPLNT QTY IND ----- PCNT		LESS THAN 25

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARK
		09-243			IND SW - HE TK TEMP	002S098	
					HE TK TEMP DEG. F. -----		
					RCS IND SEL - SM D	002S028	
					SM RCS		
					TEMP PKG IND DEG. F. -----		75+/-30
					PRESS HE IND PSIA -----		LESS THAN 200
					SEC FUEL PRESS IND PSIA -----		LESS THAN 100
					HE TK TEMP DEG. F. -----		
					IND SW - PRPLNT QTY	002S098	
					PRPLNT QTY IND PCNT -----		LESS THAN 25
					CM RCS PRPLNT		
					1 SW - (ON-UP), REL	002S045	
					2 SW - (ON-UP), REL	002S046	
					1 TB - B/P		
					2 TB - B/P		
					RCS IND SEL - CM1	002S028	
					CM RCS		
					TEMP HE IND DEG. F. -----		
					PRESS HE IND PSIA -----		
					PRESS MANF IND PSIA -----		
					RCS IND SEL - CM2	002S028	
					CM RCS		
					TEMP HE IND DEG. F. -----		
					PRESS HE IND PSIA -----		
					PRESS MANF IND PSIA -----		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		09-243			SM RCS HTRS		
					A SW - OFF	002S092	
					B SW - OFF	002S093	
					C SW - OFF	002S094	
					D SW - OFF	002S095	
					RCS CMD SW - OFF, REL	002S043	
					RCS TRNFR SW - SM, REL	002S044	
					EDS AUTO SW - OFF	002S067	
					CSM/LM FINAL SEP		
					1 SW - (OFF-DOWN), GUARDED	002S109	
					2 SW - (OFF-DOWN), GUARDED	002S112	
					CM/SM SEP		
					1 SW - (OFF-DOWN), GUARDED	002S110	
					2 SW - (OFF-DOWN), GUARDED	002S111	
					SIVB/LM SEP SW - (OFF-DOWN), GUARDED	002S108	
					ABORT SYS		
					PRPLNT SW - DUMP AUTO	002S063	
					2 ENG OUT SW - AUTO	002S064	
					LV RATES SW - AUTO	002S065	
					TWR JETT 1 SW - AUTO, GUARDED	002S066	
					TWR JETT 2 SW - AUTO, GUARDED	002S096	
					LV GUID SW - IU	002S069	
					LV SII/SIVB SW - OFF, GUARDED	002S068	
					LV XLUNAR SW - INJECT	002S070	
					MAIN REL SW - (OFF-DOWN), GUARDED	002S071	
		09-244	MTPE	SLMP	PANEL 600		

					EMER 02 VLV - CLOSE		
		09-245			PANEL 602		

					REPRESS 02		
					RELF VLV - OPEN (AUTO)		
					PRESS IND PSIG		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-246			RHC 1 - LOCKED	
		09-247			PANEL 227	
					SCI INST PWR SW - OFF	227S001
		09-248			PANEL 16	
					DOCK TRGT SW - OFF	016S001
					UTIL PWR SW - OFF	016S003
					COAS PWR SW - OFF	016S002
		09-249			PANEL 275	
					ALL CB'S CLOSED EXCEPT..	
					MNA BAT C CB - OPEN	275C011
					MNB BAT C CB - OPEN	275C012
					FLT/PL	
					BAT BUS A CB - OPEN	275C007
					BAT BUS B CB - OPEN	275C008
					BAT C CB - OPEN	275C013
		09-250			PANEL 276	
					ALL CB'S - CLOSED	
		09-251			PANEL 278	
					ALL CB'S - CLOSED	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-252			PANEL 5	
					FC PUMPS	
					1 SW - OFF	005S001
					2 SW - OFF	005S002
					3 SW - OFF	005S003
					G/N PWR SW - AC1	005S012
					MN BUS TIE	
					BAT A/C SW - OFF	005S004
					BAT B/C SW - OFF	005S005
					BAT CHGR SW - AC1	005S006
					NON ESS BUS SW - MNB	005S009
					INTERIOR LT	
					INTGL CONT - OFF	
					FLOOD CONT - OFF	
					FLOOD DIM SW - 1	005S010
					FLOOD FIXED SW - OFF	005S011
					ALL CB'S CLOSED EXCEPT..	
					INST	
					SCI EQUIP SEB 1 CB - OPEN	005C023
					SCI EQUIP SEB 2 CB - OPEN	005C024
					SCI EQUIP HATCH CB - OPEN	005C025
					WASTE H2O/UR DUMP	
					MNA CB - OPEN	005C050
					MNB CB - OPEN	005C051
		09-253			PANEL 4	
					SPS GAUGING SW - AC1	004S003
					TELE COM	
					GRP 1 SW - AC1	004S004
					GRP 2 SW - AC2	004S005
					ECS GLY PUMPS SEL - 1AC 1	004S002
					SUIT COMPR	
					1 SW - OFF	004S006
					2 SW - OFF	004S007
					ALL CB'S CLOSED	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARK
		09-254			PANEL 3	
					FC RAD	
					1 SW - CENTER 003S002	
					2 SW - CENTER 003S003	
					3 SW - CENTER 003S004	
					1 TB - GRAY	
					2 TB - GRAY	
					3 TB - GRAY	
					FC HTRS	
					1 SW - OFF 003S006	
					2 SW - OFF 003S007	
					3 SW - OFF 003S008	
					FC PURGE	
					1 SW - OFF (CENTER) 003S011	
					2 SW - OFF (CENTER) 003S012	
					3 SW - OFF (CENTER) 003S013	
					FC REAC	
					1 SW - CENTER 003S020	
					2 SW - CENTER 003S021	
					3 SW - CENTER 003S022	
					1 TB - GRAY	
					2 TB - GRAY	
					3 TB - GRAY	
					FC MN BUS A	
					1 SW - OFF 003S014	
					2 SW - OFF 003S015	
					3 SW - OFF 003S016	
					1 TB - BP	
					2 TB - BP	
					3 TB - BP	
					MN BUS A RESET SW - (CENTER) 003S017	
					FC MN BUS B	
					1 SW - OFF 003S023	
					2 SW - OFF 003S024	
					3 SW - OFF 003S025	
					1 TB - BP	
					2 TB - BP	
					3 TB - BP	
					MN BUS B RESET SW - (CENTER) 003S026	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION			REMARKS
		09-254			FC IND SEL - 1		003S010	
					FC FLOW H2 IND	LB/HR		.20 MAX
					FC FLOW 02 IND	LB/HR		.60 MAX
					FC MODL TEMP SKIN IND DEG. F.			ENGR INFO
					FC MODL TEMP COND EXH IND DEG. F.			LOWER LIMITS
					PH HI TB - GRAY			
					FC RAD TEMP LOW TB - GRAY			
					FC IND SEL - 2		003S010	
					FC FLOW H2 IND	LB/HR		.20 MAX
					FC FLOW 02 IND	LB/HR		.60 MAX
					FC MODL TEMP SKIN IND DEG. F.			ENGR INFO
					FC MODL TEMP COND EXH IND DEG. F.			LOWER LIMITS
					PH HI TB - GRAY			
					FC RAD TEMP LOW TB - GRAY			
					FC IND SEL - 3		003S010	
					FC FLOW H2 IND	LB/HR		.20 MAX
					FC FLOW 02 IND	LB/HR		.60 MAX
					FC MODL TEMP SKIN IND DEG. F.			ENGR INFO
					FC MODL TEMP COND EXH IND DEG. F.			LOWER LIMITS
					PH HI TB - GRAY			
					FC RAD TEMP LOW TB - GRAY			
					BAT CHARGE SEL - OFF		003S028	
					DC IND SEL - FUEL CELL 1		003S027	
					DC AMPS IND	AMPS		LOWER LIMITS

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARK
		09-254			DC IND SEL - FUEL CELL 2	003S027	
					DC AMPS IND AMPS		LOWER LIMITS

					DC IND SEL - FUEL CELL 3	003S027	
					DC AMPS IND AMPS		LOWER LIMITS

					DC IND SEL - MAIN BUS A	003S027	
					DC VOLTS IND VDC		29 +/- 2

					DC IND SEL - MAIN BUS B	003S027	
					DC VOLTS IND VDC		29 +/- 2

					DC IND SEL - BAT BUS A	003S027	
					DC VOLTS IND VDC		35.5 +/- 2.5

					DC AMPS IND AMPS		3 MAX

					DC IND SEL - BAT BUS B	003S027	
					DC VOLTS IND VDC		35.5 +/- 2.5

					DC AMPS IND AMPS		3 MAX

					DC IND SEL - BAT C	003S027	
					DC VOLTS IND VDC		35.5 +/- 2.5

					DC AMPS IND AMPS		3 MAX

					DC IND SEL - PYRO A	003S027	
					DC VOLTS IND VDC		35.5 +/-2.5

					DC IND SEL - PYRO B	003S027	
					DC VOLTS IND VDC		35.5 +/-2.5

					DC IND SEL - MAIN BUS A	003S027	
					INV 1 SW - MNA	003S057	
					INV 2 SW - MN B	003S058	
					INV 3 SW - OFF	003S059	
					INV 1 AC BUS 1 SW - (ON-UP)	003S060	
					INV 2 AC BUS 1 SW - OFF	003S061	
					INV 3 AC BUS 1 SW - OFF	003S062	
					AC BUS 1 RESET SW - (CENTER)	003S063	
					INV 1 AC BUS 2 SW - OFF	003S064	
					INV 2 AC BUS 2 SW - (ON - UP)	003S065	
					INV 3 AC BUS 2 SW - OFF	003S066	
					AC BUS 2 RESET SW - (CENTER)	003S067	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-254			AC IND SEL - BUS 1 PH A	003S068	
					AC VOLTS IND VAC		115 +/- 5

					AC IND SEL - BUS 1 PH B	003S068	
					AC VOLTS IND VAC		115 +/- 5

					AC IND SEL - BUS 1 PH C	003S068	
					AC VOLTS IND VAC		115 +/- 5

					AC IND SEL - BUS 2 PH A	003S068	
					AC VOLTS IND VAC		115 +/- 5

					AC IND SEL - BUS 2 PH B	003S068	
					AC VOLTS IND VAC		115 +/- 5

					AC IND SEL - BUS 2 PH C	003S068	
					AC VOLTS IND VAC		115 +/- 5

					SPS PRPLNT TK TEMP IND DEG. F.		60 - 90

					SPS PRPLNT TK PRESS FUEL IND PSIA		130 MAX

					SPS PRPLNT TK PRESS OXID IND PSIA		130 MAX

					SPS PRESS IND SW - HE	003S069	
					SPS PRPLNT TK PRESS HE IND PSIA		1300 MAX

					SPS PRESS IND SW - N2A	003S069	
					SPS PRPLNT PRESS N2 IND PSIA		2900MAX

					SPS PRESS IND SW - N2B	003S069	
					SPS PRPLNT TK PRESS N2 IND PSIA		2900MAX

					SPS ENG INJ VLV		
					A1 IND - CLOSE		
					A2 IND - CLOSE		
					B3 IND - CLOSE		
					B4 IND - CLOSE		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARK
		09-254			SPS QTY	
					OXID FLOW VLV TB (UPPER) - GRAY	
					OXID FLOW VLV TB (LOWER) - GRAY	
					TEST SW - (CENTER)	003S101
					OXID FLOW VLV	
					INCR SW - NORM	003S104
					PRIM SW - PRIM	003S103
					PUG MODE SW - NORM	003S102
					SPS HE VLV	
					1 TB - BP	
					2 TB - BP	
					1 SW - AUTO	003S018
					2 SW - AUTO	003S019
					SPS LINE HTRS SW - (OFF-CENTER)	003S075
					SPS PRESS IND SW - HE	003S069
					VHF ANT SEL - SM LEFT	003S001
					S-BAND NORM	
					XPNDR SW - OFF	003S029
					PWR AMPL PRIM SW - PRIM	003S031
					PWR AMPL HI SW - (CENTER)	003S032
					MODE	
					VOICE SW - VOICE	003S033
					PCM SW - PCM	003S034
					RNG SW - RANGING	003S035
					S BAND AUX	
					TAPE SW - (OFF-CENTER)	003S036
					TV SW - (OFF-CENTER)	003S037
					UP TLM	
					DATA SW - DATA	003S038
					CMD SW - OFF	003S039
					PWR AMPL TB - BP	
					TAPE MOTION TB - BP	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-254			S BAND ANT		
					OMNI A SW - B	003S041	
					OMNI SW - OMNI	003S040	
					VHF AM		
					SQUELCH A TW - AS IS		
					SQUELCH B TW - AS IS		
					A SW - (OFF-CENTER)	003S043	
					B SW - (OFF-CENTER)	003S044	
					RCV ONLY SW - (OFF-CENTER)	003S071	
					VHF BCN SW - OFF	003S045	
					VHF RNG SW - OFF	003S078	
					FC REACS VLV SW - NORM	003S076	
					H2 PURGE LINE HTR SW - OFF	003S077	
					TAPE RCDR		
					PCM/ANLG SW - PCM/ANLG	003S049	
					RCD SW - RECORD	003S050	
					FWD SW - REWIND	003S051	
					NOTE		
					ALLOW TAPE TO RUN TO E.O.T.		
					TAPE RCDR		
					FWD SW - (OFF - CENTER)	003S051	
					PWR SCE SW - NORM	003S052	
					PWR PMP SW - NORM	003S053	
					PCM BIT RATE SW - HIGH	003S055	
		09-255	MTPE	SLMP	PANEL 2 (RH)		
					MSN TIMER SW - RESET, REL	002S100	
					MSN TIMER IND ZERO		
					MSN TIMER SW - START	002S100	
					MSN TIMER IND COUNTING UP		
					MSN TIMER		
					HRS SW - (CENTER)	002S101	
					MIN SW - (CENTER)	002S102	
					SEC SW - (CENTER)	002S103	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION			REMARKS
		09-255			C/W			
					NORMAL SW - ACK		002S007	
					CSM SW - CSM		002S008	
					PWR SW - 1		002S009	
					LAMP TEST SW - (CENTER)		002S079	
					PL VENT VLV CONT - (PUSH, LOCK)			
					CRYO TK			
					PRESS H2 1 IND -----	PSIA		ENGR INFO
					PRESS H2 2 IND -----	PSIA		ENGR INFO
					02 PRESS IND SW - SURGE TANK		002S016	
					CRYO TK PRESS 02 1 IND -----	PSIA		ENGR INFO
					02 PRESS IND SW - TK 1		002S016	
					CRYO TK			
					PRESS 02 1 IND -----	PSIA		ENG INFO
					PRESS 02 2 IND -----	PSIA		ENG INFO
					QTY H2 1 IND -----	PCNT		ENG INFO
					QTY H2 2 IND -----	PCNT		ENG INFO
					QTY 02 1 IND -----	PCNT		ENG INFO
					QTY 02 2 IND -----	PCNT		ENG INFO
					CABIN FAN			
					1 SW - (ON - UP)		002S029	
					2 SW - (ON - UP)		002S030	
					TIME ----------			
					H2 HTRS			
					1 SW - OFF		002S012	
					2 SW - OFF		002S013	
					02 HTRS			
					1 SW - OFF		002S014	
					2 SW - OFF		002S015	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-255			H2 FANS		
					1 SW - OFF (CENTER)	002S017	
					2 SW - OFF (CENTER)	002S018	
					O2 FANS		
					1 SW - OFF (CENTER)	002S019	
					2 SW - OFF (CENTER)	002S020	
					ECS IND SEL - PRIM	002S089	
					ECS RAD TEMP PRIM/SEC IN IND DEG. F.		
					ECS RAD TEMP PRIM OUT IND DEG. F.		
					GLY EVAP PRIM TEMP OUT IND DEG. F.		
					GLY EVAP STEAM PRESS IND PSIA		
					GLY DISCH PRESS IND PSIG		60 MAX
					TEMP SUIT IND DEG. F.		
					TEMP CABIN IND DEG. F.		
					PRESS SUIT IND PSIA		
					PRESS CABIN IND PSIA		
					CO2 PART PRESS IND MMHG		
					ECS RAD		
					FLOW CONT AUTO SW - AUTO	002S084	
					TB - GRAY		
					FLOW CONT PWR - (CENTER)	002S085	
					MAN SEL SW - RAD 1	002S086	
					HTR PRIM SW - OFF	002S087	
					HTR SEC SW - OFF	002S088	
					SUIT COMPR DP IND PSI		
					ACCUM PRIM/SEC QTY IND PCNT		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARK
		09-255			H2O QTY IND SW - WASTE	002S056
					H2O QTY IND PCNT	

					H2O QTY IND SW - POT	002S056
					H2O QTY IND PCNT	

					POT H2O HTR SW - OFF	002S042
					SUIT CKT	
					H2O ACCUM AUTO SW - (CENTER)	002S051
					H2O ACCUM ON SW - CENTER	002S052
					HEAT EXCH SW - CENTER	002S057
					SEC COOL LOOP	
					EVAP SW - RESET FOR 58 SEC	002S053
					MINIMUM, THEN (OFF CENTER)	
					PUMP SW - (OFF CENTER)	002S054
					GLY EVAP	
					TEMP IN SW - MAN	002S061
					STEAM PRESS AUTO SW - MAN	002S059
					STEAM PRESS INCR SW - INCR,	002S060
					FOR 58 SEC MINIMUM, THEN	
					DEC 8.5 +/- .5 SEC, THEN REL	
					H2O FLOW SW - (OFF CENTER)	002S058
					CABIN TEMP	
					SW - MAN	002S062
					TW - MAX DECR	
					HIGH GAIN ANT	
					PWR SW - OFF	002S076
					TRACK SW - AUTO	002S077
					BEAM SW - WIDE	002S090
					PITCH IND - DEG.	

					YAW IND - DEG.	

					PITCH POS CONT - AS IS	
					YAW POS CONT - AS IS	
					SERVO ELEC SW - PRIM	002S083
		09-256			SIDE HATCH AREA	

					CABIN PRESS DUMP VLV - CLOSE	
					(CW)	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-257	MTPE	MSTC	MDC SWITCHLIST COMPLETE.	
-10 15		09-258			MSS STARTS MOVING AWAY (L/V)	
-10 00		09-259			(DELETED)	*1
					NOTE ALL COUNT CLOCK INDICATORS ON ML DISABLED AT T-10 : 0	
-09 45		09-260	MTPE	SPAD	PROCEED WITH PREPS FOR HATCH CLOSING.	
		09-261	MSTC	HFLT	GIVE STATUS FOR LAUNCH MISSION E-MEMORY LOAD. IDENTIFY ANY MEMORY LOCATIONS THAT WILL NON-VERIFY.	
		09-262	MSTC	MGNS	PERFORM E-MEMORY VERIFY PER SEQ 11V2.	
					NOTE MSS MUST BE CLEAR OF THE VEHICLE BEFORE PROCEEDING WITH RF TESTS.	
-09 35		09-263	MSTC	CTSC	VERIFY READY TO PROVIDE ACCESS TO 320 FT LEVEL SAFETY LOCKER.	
-09 30		09-264	MSTC	CVTS	1. VERIFY CLEARANCE FOR SC RF.. S-BAND VHF-AM 2. CSM CMD DECODER IS OFF 3. HAVE GMIL AND HFLT PROVIDE SUPPORT ON CH 212. 4. CSM VERIFIES CCS NOT ENABLED.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-265	MTPE	SLMP	PANEL 3	
					S BAND NORM XPNDR SW - PRIM 003S029 S BAND NORM PWR AMPL HI SW - HIGH 003S032 VHF AM B SW - DUPLEX 003S044	
				SLMP	S-BAND PA TB - GRAY (90 SEC DELAY)	
		09-266	MSTC	GMIL	1. VERIFY 2-WAY LOCK (AFTER 90 SEC) AT -70 DBM. 2. VERIFY READY FOR A/G VOICE CHECKS ON S-BAND AND VHF-AM DUPLEX B 3. ENABLE ACS S-BAND AND VHF-AM DUPLEX B CIRCUITS 4. VERIFY SYNC ON A/B PCM.	MODE 6.2.0
		09-267	MTPE	SLMP	VERIFY S-BAND ANT IND GREATER THAN 1/3 SCALE.	
		09-268	MSTC	HFLT	VERIFY READY FOR A/G VOICE CHECKS	
		09-269	MTPE	CSTO	1. PUT CH 223 ON UMBILICAL 2. PUT CSM S/C TC ON S-BAND	
	222	09-270	MTPE	SCDR	PANEL 9	
					MODE SW - ICOM/PTT 009S001 PAD COMM SW - T/R 009S003 PWR SW - AUDIO/TONE 009S006 SUIT PWR SW - (ON-UP) 009S007 INTERCOM SW - T/R 009S005 VHF AM SW - T/R 009S004 S BAND SW - T/R 009S002 AUDIO CONTROL SW - NORM 009S008 MASTER VOLUME TW - 5 VHF RNG RESET SW - NORMAL 009S009	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-271	MTPE	SCMP	PANEL 10	
					MODE SW - ICOM/PTT	010S001
					PAD COMM SW - T/R	010S003
					PWR SW - AUDIO/TONE	010S006
					SUIT PWR SW - (ON-UP)	010S007
					INTERCOM SW - T/R	010S005
					VHF AM SW - T/R	010S004
					S BAND SW - T/R	010S002
					AUDIO CONTROL SW - NORM	010S008
					MASTER VOLUME TW - 5	
		09-272	MTPE	SLMP	PANEL 6	
					MODE SW - ICOM/PTT	006S001
					PAD COMM SW - T/R	006S003
					PWR SW - AUDIO/TONE	006S006
					SUIT PWR SW - (ON-UP)	006S007
					INTERCOM SW - T/R	006S005
					VHF AM SW - T/R	006S004
					S BAND SW - T/R	006S002
					AUDIO CONTROL SW - NORM	006S008
					MASTER VOLUME TW - 5	
		09-273	MTPE	SCDR SLMP	REPLACE OIS HEADSETS WITH ASTRO HEADSET.	
		09-274	MTPE	MSTC CSTO MCSE MNQC	REPORT TO CH. 212 FOR COMM CKS	
		09-275	MSTC	SCDR SLMP	PERFORM PAD COMM CHECK (VIA UMBILICAL CH 223) ADJUST PAD COMM VOLUME LEVEL. ADJUST VHF AM A SQUELCH AS REQ'D FOR MIN NOISE AND INCREASE TW ONE NUMBER. RECORD TW SETTING .	
					PAD COMM TW - SCDR _____ SLMP _____ .	
		09-276	MSTC	CSTO	RELEASE UMBILICAL.	
		09-277	MSTC	SCDR SLMP	PERFORM COMM CHECK ON CH 212 (VIA S BAND). ADJUST S-BAND VOLUME LEVEL. REPORT TW SETTING SCDR _____	
					SLMP _____	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-278	MSTC	CSTO	1. PUT CH 214 ON VHF 2. RELEASE S-BAND	
		09-279	MSTC	SCDR SLMP	PERFORM COMM CHECK ON CH 214 (VIA VHF AM) ADJUST VHF AM VOLUME LEVEL. REPORT TW SETTING SCDR ----- SLMP -----	
		09-280	MSTC	CSTO	1. PUT CH 214 ON UMBILICAL. 2. RELEASE VHF	
		09-281	MSTC	SCDR	1. RETURN TO OIS HEADSETS. 2. REPORT TO MTPE ON CH 222	
		09-282	MSTC	SLMP	DON SCMP COMM CARRIER HEADSET.	
		09-283	MSTC	GMIL	CONFIGURE UP VOICE B/U MODE 8.2.0.	
		09-284	MSTC	SLMP	PANEL 3 UP TLM DATA SW - UP VOICE B/U ESTABLISH 2-WAY COMM WITH HFLT ON S-BAND.	
		09-285	MSTC	HFLT	VERIFY UP VOICE B/U CHECKS COMPLETE.	
		09-286	MSTC	SLMP	PANEL 3 UP TLM DATA SW - DATA	
		09-287	MSTC	GMIL	CONFIGURE FOR DN VOICE B/U MODE 6.16.0.	
		09-288	MSTC	SLMP	PANEL 3 S-BND AUX TAPE SW - DN VOICE B/U ESTABLISH 2-WAY COMM WITH HFLT ON S-BAND.	
		09-289	MSTC	HFLT	VERIFY DN VOICE B/U CHECK COMPL.	
		09-290	MSTC	SLMP	PANEL 3 S-BND AUX TAPE SW - OFF	
		09-291	MSTC	GMIL	CONFIGURE FOR S-BND MODE 6.2.0.	
		09-292	MSTC		PERFORM 2-WAY VOICE CHECK WITH SCMP USING VHF BACK-UP TRANSCEIVER	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-293	MSTC	HFLT	PERFORM COMM CHECK WITH SCMP ON VHF.	
		09-294	MSTC	HFLT	PERFORM COMM CHECK WITH SCMP ON S-BAND.	
		09-295	MSTC	GMIL	1. DISABLE S-BAND ACS UPLINK. 2. ENABLE VHF/S-BAND SIMUL CAPABILITY. 3. ENABLE VHF U/L CONSTANT KEY.	
		09-296	MSTC		RELEASE AUDIO PUSH BUTTONS AND PERFORM 2-WAY VOICE COMM WITH SLMP USING EMER UMB.	
		09-297	MSTC	CSTO	PUT S-BAND ON CH 212. PUT VHF ON CH 214.	
	214	09-298	MSTC		PERFORM 2-WAY VOICE COMM CHECK WITH SCMP ON CH 214.	
	212	09-299	MSTC	MTPE	VERIFY SCMP VOICE ON CH 212	
		09-300	MSTC	HFLT	PERFORM COMM CHECK WITH SCMP ON VHF AND S-BAND SIMULTANEOUSLY.	
		09-301	MSTC	GMIL	1. RELEASE VHF/S-BAND SIMUL CAPABILITY. 2. RELEASE VHF U/L CONSTANT KEY.	
		09-302	MSTC	SLMP	RETURN TO OIS HEADSET. REPORT TO MTPE ON CH 222	
		09-303	MSTC	CSTO	RELEASE UMBILICAL.	
		09-304	MTPE	SCDR	PANEL 9 SUIT PWR SW - OFF PWR SW - OFF DISCONNECT ASTRO HEADSET AND HAND TO SPAD. DISCONNECT CWG ELECTRICAL ADAPTER FROM CCU.	009S007 009S006
		09-305	MTPE	SCMP	PANEL 10 SUIT PWR SW - OFF PWR SW - OFF MASTER VOL TW - 6 INT VOL TW - 6 S-BND VOL TW - 6 VHF VOL TW - 7	010S007 010S006

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-305			DISCONNECT ASTRO HEADSET AND HAND TO SPAD. DISCONNECT CWG ELECTRICAL ADAPTER FROM CCU.	
		09-306	MTPE	SLMP	PANEL 6	
					SUIT PWR SW - OFF	006S007
					PWR SW - OFF	006S006
					DISCONNECT ASTRO HEADSET AND HAND TO SPAD. DISCONNECT CWG ELECTRICAL ADAPTER FROM CCU.	
		09-307	MTPE	SCMP	PANEL 100	
					LEB LT NUMERICS CONT - OFF	
		09-308	MTPE	SCDR	PANEL 8	
					INT NUMERICS CONT - OFF	
				MEPE	HR _____ MIN _____ SEC _____	
		09-309	MTPE	SLMP	PANEL 226	
					NUM/INTG LTG LEB AC 2 CB - OPEN	226C033
					NUM/INTG LTG LMDC AC 1 CB - OPEN	226C037
		09-310	MTPE	SCMP	STOW 3 EA. CWG ADAPTERS IN DETA CONTAINERS IN COMPT A8.	
-09 05		09-311	MTPE	SLMP	EGRESS FROM COMMAND MODULE	
		09-312	MTPE	SCMP SPAD	PREP CABIN FOR FLIGHT CREW INGRESS.	
		09-313	MTPE	SNQC SGQC	REPORT COMPLETION OF LUT - PAD INSPECT (T/S 8.2.5.5.1)	------ NR QC ------- NASA QC
-09 00		09-314	MTPE	SPAD	CLEAR PAD OF ALL NON-ESSENTIAL SC PERSONNEL	

NOTE

ESSENTIAL PERSONNEL ARE..

SA-9	PAD APRON
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TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-314				
					SPAD VEHICLE DRIVER (1) SLMP SCMP +80 FT SCMT ------ SNQC UGCU SGQC UWGR	
		09-315	SCMP		PROCEEDS AS FOLLOWS.. 1. CREW ASSIST BAR ON MDC EXTENDED AND LOCKED 2. COUCH HEAD RESTS IN VENTILATED SUIT POSITION 3. THC ARM REST IN LAUNCH POSITION AND LOCKED. 4. COUCH INBOARD ARM RESTS/ CONTROLLERS STOWED AND LOCKED 5. CREW COUCHES WITH Y-Y STRUTS EXTENDED AND LOCKED. 6. COUCH SEAT PANS IN 85 DEG POSITION AND LOCKED 7. 02 UMBILICALS, CCU CONTROL HEADS AND CCU CABLES STOWED. 8. SHOULDER HARNESSES UNLOCKED AND RESTRAINT STRAPS LAID ASIDE, EXTENDED AND SNAPPED IN PLACE 9. COUCH STABILIZATION LINK - STOWED 10. EGRESS CM.	
		09-316	CVTS	MSTC	SMDPS IS IN 1 SW/1 VLV MODE.	
		09-317	MSTC	GMIL	RELEASE ACS S-BAND AND VHF CIRCUITS.	
-09 00		09-318			*** BUILT-IN HOLD ***	
					NOTE BUILT-IN HOLD OF 6 HOURS (MAX) TO BE UTILIZED AS A NON-SCHEDULED WORK PERIOD. PREVIOUS ACCUMULATED HOLD TIMES WILL REDUCE THIS HOLD BY A CORRESPONDING PERIOD.	
		09-319	MSTC	SPAD	NOTE WITH EEAP BREATHING UNIT, PERFORM COMM CHECK WITH CVTS ON RF/POINT-TO-POINT NET	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-319			DESIGNATED EMERGENCY EGRESS NO. 1.	
		09-320	MSTC	CVTS	STANDBY FOR RF COMM CHECK WITH SPAD USING EEAP.	
-09 00		09-321			*** RESUME COUNT ***	
		09-322	MTPE	SCMP	PANEL 2	
					STATUS C/W LITES C/W PWR SW - (OFF - CTR)	
		09-323	MTPE	SLMP	PANEL 5	
					C/W MNA CB - OPEN	005C052
					C/W MNB CB - OPEN	005C053
		09-324	MSTC	CVTS	1. EDS POWER IS COMING ON	
					2. CHANGE SMDPS FROM 1 SW/1 VLV TO 1 SW.	
		09-325	MTPE	SCDR	PANEL 7	
					EDS POWER SW - (ON-UP)	007S001
			MSEQ		EDS VOTE 1 OUT LITE ON	CD0132
					EDS VOTE 2 OUT LITE ON	CD0133
					EDS VOTE 3 OUT LITE ON	CD0134
		09-326	MTPE	SCMP	PANEL 2	
					EDS AUTO SW - (ON-UP)	002S067
		09-327	MTPE	SPAD	1. VERIFY CABIN PREPS COMPLETE	
					2. CLOSE CM HATCH AND BPC HATCH PER 8.2.6.1.2 THRU 8.2.6.1.5.	
					3. REPORT COMPLETION AND STATUS FOR CLEARING PAD.	

NR QC NASA QC

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-328	MTPE	ALL	GIVE STATUS FOR ACCESS ARM CLEARING.	

NOTE

THIS IS FINAL SC STATUS
PRIOR TO L/V TANKING

MECS _____	MRCS _____
MLFC _____	MACE _____
MEPS _____	MBSE _____
MGNS _____	MREC _____
MSCS _____	MCSE _____
MSPS _____	SPAD _____
	SCMP _____
	SLMP _____

		09-329	MTPE	SPAD	1. CLEAR ACCESS ARM AND UMBILICAL TOWER OF ALL PERSONNEL 2. STAND BY IN FALL BACK AREA FOR RETURN TO PAD AT T +05 30.	

NOTE

CREW MUST BE CLEAR OF LUT BY
T-08 15 AND CLEAR OF PAD BY
T-08 00.

-08 30		09-330	MSTC	CVTS	CSM PERSONNEL ARE CLEARING THE COMPLEX	
-08 15		09-331			L/V STARTS TANKING. (L/V)	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
-04 35		09-332	MSTC	MGNS	PERFORM CMC DELTA TIME CHECK ON CH 215.	
		09-333	MSTC	HFLT	REQUEST NEW AZIMUTH OR VERIFY OLD AZIMUTH IS CORRECT.	
					NOTE IF NEW AZIMUTH DESIRED, PERFORM THE FOLLOWING..	
				HFLT	NEW AZIMUTH + ---------	
		09-334	MSTC	MGNR	K148 INSERT V78E V21E + (NEW AZIMUTH) ---------- ENTER V33E	
		09-335	MSTC	HFLT	GIVE STATUS FOR LAUNCH/MISSION E-MEMORY LOAD. IDENTIFY E-MEMORY LOCATIONS THAT WILL NON-VERIFY.	
					NOTE IF CHANGES REQUIRED, PERFORM E-MEMORY LOAD PER SEQ. 11 V2.	
-04 30		09-336	MSTC	MGNS	PERFORM E-MEMORY VERIFY PER SEQ 11V2 ON CH 215.	
-04 11		09-337			NOTE Q-BALL POWER ON	
-03 30		09-338			L/V TANKING COMPLETE (L/V)	
-03 20		09-339			NOTE PRIMARY DAMPER RETRACT	
		09-340	MSTC	BOTV	HAVE OTV CAMERA AA2 PATCHED TO MONITOR 67. HAVE OTV CAMERA 7 PATCHED TO MONITOR 68.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-341	MSTC	MSEQ	SWITCH TO CH 223 FOR PARTIAL EDS TEST.	
-01 51		09-342	MSTC	CVTS	SC PERSONNEL ON CH 223 FOR EDS TEST.	
					NOTE FOR WET CDDT, L/V WILL PROCEED TO T-ZERO WITHOUT CSM SUPPORT AND CSM PERSONNEL WILL NOT RETURN TO THE PAD UNTIL COMPLETION OF WET CDDT.	
-01 15		09-343	CVTS	MSTC	MONITOR CH 121 FOR Q-BALL SIM CMD AT T-01 13. PROVIDE READING TO VUMS ON CH 148. LS0200 -----	
-00 43		09-344			SA-9 RETRACT (L/V)	
-00 08		09-345	MSTC	KSTC	VERIFY GO FOR LAUNCH	
-00 06		09-346	MSTC	CSAT	READY SW - ON	
		09-347	MSTC	CVTS	SC IS GO FOR LAUNCH READY SW IS ON	
+00 00 -24 00		09-348			WET CDDT COMPLETE (L/V)	
					NOTE DRY CDDT T-ZERO WILL BE 24 HOURS FROM THIS TIME. (NOTE- FOLLOWING TIMES IN HOURS AND MINUTES)	
		09-349			SA-9 RECONNECT (L/V)	
+04 30 -19 30		09-350			L/V DETANKING COMPLETE (L/V)	
+05 30 -18 30		09-351	CVTS	MSTC	CONTROL AREA IS NOW OPEN FOR NORMAL WORK	
		09-352	MTPE	SPAD	RETURN TO SA-9 WITH ESSENTIAL CREW. REPORT WHEN ON STATION.	
					NOTE	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-352			FOLLOWING CSM PERSONNEL REQUIRED ON STATION.. SA-9 LUT --- --- SPAD UWGR SCMP UGCU SLMP LNQC SCMT SGQC SNQC	
		09-353	MSTC	CVTS	1. CHANGE SMDPS FROM 1 SW TO 2 SW 1 VLV 2. HAVE CTSC PROVIDE 02 SAMPLE SUPPORT ON SA-9.	
		09-354	MSTC	CTSC	PROVIDE MASS SPEC SUPPORT ON SA-9 AT T+06 00.	
		09-355	SPAD	MTPE	S/C CREW ON STATION	
		09-356	MTPE	SPAD	1. RE-INSTALL ENVIRONMENTAL CHAMBER PANELS AND OPEN BPC HATCH AND CM HATCH PER 8.2.6.1.6 2. REPORT COMPLETION.	NR QC NASA QC *1
		09-357			DELETED	*1
		09-358	MTPE	MECS	PERFORM FACILITY GAS MIX (60/40) VERIFICATION PER SEQ 05V2.	*1
+06 00 -18 00		09-359	MTPE	SCMP SLMP	INGRESS CM . . .	*1
		09-359A	MSTC	CTSC	NOTIFY PRFI TO BEGIN RE-INSTALLATION OF SPECIAL INSTRUMENTATION ON 280 FT LEVEL.	*1
-16 15						
		09-360	MTPE	MEPS	PERFORM BATT STATUS CHECK	*1
		09-361	MEPS	SLMP	PANEL 3 BAT A _____ VDC BAT B _____ VDC	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-361			BAT C VDC ----- RETURN SEL - MN A	
		09-362	MTPE	SLMP	PANEL 2 EDS AUTO SW - OFF	
		09-363	MTPE	SCMP	PANEL 7 EDS PWR SW - OFF	007S001
			MSEQ		EDS VOTE 1 OUT LITE OFF EDS VOTE 2 OUT LITE OFF EDS VOTE 3 OUT LITE OFF	CD0132 CD0133 CD0134

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-364	MTPE	SCDR	PANEL 8	
					EDS 1 CB - OPEN	008C049
					EDS 2 CB - OPEN	008C050
					EDS 3 CB - OPEN	008C051
		09-365	MTPE	SLMP	PANEL 5	
					C/W MNA CB - CLOSE	005C052
					C/W MNB CB - CLOSE	005C053
		09-366	MTPE	SCMP	PANEL 2	
					C/W PWR SW - 1	
					C/W NORM SW - NORMAL	002S007
					STATUS C/W LITES	
		09-367	MTPE	SCDR	PANEL 1	
					MASTER ALARM P/B - RESET	001S001
		09-368	MTPE	SCMP	PANEL 2	
					C/W NORM SW - ACK	002S007
		09-369	MTPE	SLMP	PANEL 3	
					S-BAND NORM PWR AMPL HI SW - OFF	003S032
					S-BAND NORM XPNDR SW - OFF	003S029
					VHF AM B SW - OFF	003S044
+06 30 -17 30		09-370	MSTC	CVTS	CSM RF IS OFF EDS PWR IS OFF	
+06 45 -17 15		09-370A	MTPE	SPAD	PUNCTURE GN2 PRESS VESSEL PER T/S 8.2.6.1.7.	
					REPORT COMPLETE	NR QC / NASA QC *1
+07 15 -16 45		09-370B	MTPE	SPAD	INSTALL CO2 ABSORBERS PER T/S 8.2.6.1.8.	
					REPORT COMPLETE	NR QC / NASA QC *1
+07 30		09-370C	MTPE	MECS	PERFORM SUIT CKT LEAK CHECK, PURGE AND SAMPLING.	*1

+08 00 -16 00	09-371	MECS	MTPE	SUIT CIRCUIT LEAK CHECK, PURGE AND SAMPLINGS COMPLETE.	*1
	09-371A	CVTS	MSTC	REQUEST CLEARANCE TO W/R FOR 3 FILM CAMERA CHECKERS FOR 15 MIN.	*1
				NOTE ALL SYSTEMS MONITOR CSM UNTIL T-11 30 BACK-UP CREW CK.	*1
	09-371B	MTPE	SPAD SNQC	PROCEED WITH HATCH CLOSEOUT INSP PER T/S 8.2.6.2.1.	*1
	09-372	MTPE	SPAD	PERFORM T/S 8.2.6.1.9/PRE-CREW INGRESS INSP.	*1
-12 00	09-372A	MTPE		NOTIFY BACKUP CREW TO REPORT ON STATION.	*1
-11 30	09-372B	SPAD	MTPE	BACKUP CREW ON STATION.	*1
	09-372C	MTPE	SPAD	VERIFY T/S 8.2.6.1.9 (PRE-CREW INGRESS INSPECT) COMPLETE.	NR QC / NASA QC *1
	09-372D	MTPE	SCMP	INGRESS L.H. COUCH	*1
	09-372E	MTPE	SLMP	INGRESS R.H. COUCH	*1

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-372F				*1
		09-372GMTPE	SCMP SLMP		OBTAIN 3 (EA.) TRAINING ASTRO HEADSETS FROM SPAD AND CONNECT TO CWG ADAPTERS (P1). LAY HEADSETS ASIDE.	*1
					NOTE THE FOLLOWING CM OPERATIONS WILL BE PERFORMED BY SCMP AND SLMP (BACK-UPS). CALLS TO SCDR ARE REFERENCED TO THE LEFT HAND COUCH STATION.	
		09-372H MTPE	SCMP		PANEL 2	*1
					C/W NORMAL SW - NORMAL 002S007 C/W CSM SW - CSM 002S008 C/W PWR SW - 2 002S009 TAKE STATUS OF C/W LITES	
			SCDR		PANEL 1 MASTER ALARM LITE ON	
			SLMP		PANEL 3 MASTER ALARM LITE ON	
			SCMP		PANEL 122 MASTER ALARM LITE ON MASTER ALARM PB - RESET	
		09-372I MTPE	SCMP		PANEL 2 C/W PWR SW - 1	*1
			SCDR		PANEL 1 MASTER ALARM LITE ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-372J		SLMP	PANEL 3		*1
					MASTER ALARM LITE ON		
				SCMP	PANEL 122		
					MASTER ALARM LITE ON MASTER ALARM PB - RESET		
		09-372K	MTPE	SCMP	PANEL 2		*1
					C/W LAMP TEST SW - 1, HOLD	002S079	
			SCMP		L.H. CW LITES (LABELED) ON C/W NORMAL SW - BOOST	002S007	
			SCDR		PANEL 1		
					MASTER ALARM LITE OFF		
		09-372L	MTPE	SCMP	PANEL 2		*1
					C/W NORMAL SW - NORMAL	002S007	
			SCDR		PANEL 1		
					MASTER ALARM LITE ON		
		09-372M	MTPE	SCMP	PANEL 2		*1
					C/W LAMP TEST SW - 2, HOLD	002S079	
			SCMP		L.H. C/W LITES (LABELED) OFF (EXCEPT LITES ON DURING STATUS) R.H. C/W LITES (LABELED) ON		
			SCDR		PANEL 1		
					MASTER ALARM LITE OFF		
			SLMP		PANEL 3		
					MASTER ALARM LITE ON		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-372N	MTPE	SCMP	PANEL 2		*1
					C/W LAMP TEST SW - REL	002S079	
				SCMP	R.H. C/W LITES (LABELED) OFF (EXCEPT LITES ON DURING STATUS)		
				SLMP	PANEL 3		
					MASTER ALARM LITE OFF		
		09-372O	MTPE	SCMP	PANEL 2		*1
					C/W NORMAL SW - ACK	002S007	
					EMS PRELAUNCH TEST		
					(5/32 IN HEX DRIVER REQUIRED)		
		09-372P	MTPE	SCDR	PANEL 1		*1
					EMS FUNCTION SEL SW - OFF		
					PANEL 8		
					EMS MN A CB - CLOSE	008C052	
					EMS MN B CB - CLOSE	008C053	
					PANEL 1		
					OPEN EMS GTA COVER		
					EMS GTA SW - (UP)	001A103	
					EMS MODE SW - STBY	001A102	
					EMS FUNCTION SEL - DV	001A101	
					NOTE		
					WAIT 5 SEC		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-372Q	MTPE	SCDR	EMS MODE Sw - NORMAL	001A102	*1
					EMS GTA NUL ADJUSTMENT - ADJUST UNTIL EMS RANGE-DV IND LEAST SIGNIFICANT DIGIT CHANGES LESS THAN 1 UNIT IN 10 SEC INTERVAL.		
					EMS FUNCTION SEL - DV SET/ VHF RNG	001A101	
					EMS DV/EMS SET SW - SLEW EMS RANGE/DV IND TO +1586.8		
					EMS FUNCTION SEL - DV TEST	001A101	
				SCDR	EMS SPS THRUST LITE ON		
					EMS RANGE/DV IND DECREASES (10 SEC)		
					EMS SPS THRUST LITE OFF (AT DV APPROX -0.1 FPS)		
					EMS RANGE/DV IND - STOPS AT -20.8 +/- 20.7 FPS		
		09-372R	MTPE	SCDR	EMS MODE SW - STBY	001A102	*1
					EMS FUNCTION SEL - EMS TEST 1	001A101	
					NOTE		
					WAIT 5 SEC		
					EMS MODE SW - NORMAL	001A102	
					NOTE		
					WAIT 10 SEC		
				SCDR	EMS .05 G LITE OFF		
					EMS SPS THRUST LITE OFF		
					(EMS RSI LOWER) LITE OFF		
					(EMS RSI UPPER) LITE OFF		
					EMS RANGE/DV IND 0.0		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		09-372S	MTPE	SCDR	SLEW (EMS) G-V SCROLL UNTIL DISPLAY INDEX IS SUPERIMPOSED UPON NOTCH IN NEXT SELF-TEST PATTERN.	*1
					RECORD SELF TEST PATTERN NO. _____	
					EMS FUNCTION SEL - EMS TEST 2 001A101	
			SCDR		EMS .05 G LITE ON	
					NOTE	
					WAIT 10 SEC	
					ALL OTHER EMS LITES OFF	
		09-372T	MTPE	SCDR	EMS FUNCTION SEL - EMS TEST 3 001A101	*1
			SCDR		EMS .05 G LITE ON	
					NOTE	
					WAIT 10 SEC	
					EMS RSI LOWER LITE ON	
		09-372U	MTPE	SCDR	EMS DV-EMS SET SW - SLEW EMS RANGE/DV IND TO 58 +/- 0.0 NM	*1
					EMS FUNCTION SEL - EMS TEST 4 001A101	
			SCDR		EMS .05 G LITE ON	
					ALL OTHER EMS LITES OFF	
					EMS G-V SCROLL TRACE WITHIN TEST PATTERN FOR 10 SEC, THEN STOPS IN LOWER RIGHT CORNER.	
					EMS RANGE/DV IND COUNTS TOWARD ZERO FOR 10 SEC, THEN STOPS AT 0.0 +/- 0.2.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-372V	MTPE	SCDR	EMS FUNCTION SEL - EMS TEST 5	001A101	*1
				SCDR	EMS .05 G LITE ON		
					NOTE		
					WAIT 10 SEC		
					EMS RSI UPPER LITE ON EMS RANGE/DV IND 0.0		
					EMS G-V SCROLL SCRIBE TRACES VERTICAL LINE APPROX 9 G TO 0.22 +/- 0.1 G AND STOPS (TRACE WITHIN TEST PATTERN)		
		09-372W	MTPE	SCDR	EMS FUNCTION SEL - RNG SET	001A101 001A102	*1
				SCDR	EMS G-V SCROLL SCRIBE TRACES VERTICAL LINE FROM 0.22 G TO 0 +/- 0.1 G AND STOPS.		
		09-372X	MTPE	SCDR	EMS MODE SW - STBY		*1
				SCDR	ALL EMS LITES OFF		
		09-372Y	MTPE	SCDR	EMS FUNCTION SEL - OFF	001A101	*1
					EMS GTA SW - (DOWN)	001A103	
					CLOSE GTA COVER		
		09-372Z	MTPE	SCMP	PANEL 377		*1
					GLY TO RAD SEC VLV - NORMAL		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-372AA	MTPE	SLMP	PANEL 2		*1
					ECS IND SEL - SEC	002S089	
					SEC COOL LOOP PUMP SW - AC1	002S054	
					TIME		
					ECS RAD TEMP PRIM/SEC IN IND DEG. F		
					ECS RAD TEMP SEC OUT IND DEG. F		
					GLY EVAP TEMP OUT IND DEG. F		
					GLY EVAP STEAM PRESS IND PSIA		PEG HIGH
					GLY DISCH PRESS IND PSIG		60 MAX
					ACCUM PRIM/SEC QTY PCNT		
					SEC COOL LOOP PUMP SW - AC2	002S054	
					GLY DISCH PRESS IND PSIG		60 MAX
					SEC COOL LOOP PUMP SW - (OFF-CENTER)	002S054	
					TIME		
					ECS IND SEL - PRIM	002S089	
		09-372AB	MTPE	SCMP	PANEL 377		*1
					GLY TO RAD SEC VLV - BYPASS		
		09-372AC	MTPE	SLMP	PANEL 2		*1
					GLY DISCH PRESS IND PSIG		60 MAX
					ACCUM PRIM/SEC QTY IND PCNT		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		09-372AD			PANEL 4		*1
					ECS GLY PUMPS SEL - 1 AC1	004S002	
					TIME ----------		
					PANEL 2		
					GLY DISCH PRESS IND PSIG -----		60 MAX
					ECS RAD FLOW CONT PWR SW - PWR	002S085	
					ECS RAD FLOW CONT AUTO SW - 2	002S084	
					ECS RAD TB - 2		
					ECS RAD FLOW CONT AUTO SW - 1	002S084	
					WAIT 20 SEC - THEN AUTO		
					ECS RAD TB - GRAY		
					ECS RAD FLOW CONT PWR SW - (CENTER)	002S085	
		09-372AE	MTPE	SCDR	PANEL 7		*1
					DIRECT 02 VLV - CLOSE CW		
				SLMP	PANEL 2		
					02 FLOW IND LB/HR -----		
		09-372AF	MTPE	SLMP	PANEL 3		*1
					AC BUS 2 RESET SW - OFF	003S067	
			MEPE		HR MIN SEC ----- ----- -----		
		09-372AG	MTPE	SLMP	PANEL 3		*1
					INV 3 SW - MNB	003S059	
					INV 2 AC BUS 2 SW - OFF	003S065	
					INV 3 AC BUS 2 SW - (ON-UP)	003S066	
					AC BUS 2 RESET SW - RESET, REL	003S067	
					REL		
					MASTER ALARM LITE ON		
					MASTER ALARM PB - RESET		

TIME	COMM CM	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-372AH	SLMP		AC BUS 2	*1
					PH A VAC _____	115 +/- 5
					PH B VAC _____	115 +/- 5
					PH C VAC _____	115 +/- 5
		09-372AI	MTPE	SLMP	PANEL 3	*1
					AC BUS 2 RESET SW - OFF 003S067 INV 3 AC BUS 2 SW - OFF 003S066 INV 2 AC BUS 2 SW - (ON-UP) 003S065 AC BUS 2 RESET SW - RESET, REL 003S067 REL	
					MASTER ALARM LITE ON MASTER ALARM PB - RESET INV 3 SW - OFF	
				MEPE	HR _____ MIN _____ SEC _____	
				SLMP	AC BUS 2	
					PH A VAC _____	115 +/- 5
					PH B VAC _____	115 +/- 5
					PH C VAC _____	115 +/- 5
		09-372AJ	MSTC	HFLT	STAND BY FOR BATTERY STATUS.	*1
		09-372AK	MSTC	MEPS	GIVE STATUS OF ENTRY/POST LANDING BATTERIES SINCE FULL CHARGE.	*1
				MEPS	BAT A _____ AMP HRS REMOVED (APPROX)	
					BAT B _____ AMP HRS REMOVED (APPROX)	
					BAT C _____ AMP HRS REMOVED (APPROX)	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-10 30		09-372AL	MSTC	MTPE SCMP MNQC	PERFORM LEB CLOSEOUT SWITCH LIST ON CH 222. REPORT COMPLETION	*1

NOTE

ALL SYSTEMS MONITOR

NOTE

5/32 IN. ALLEN WRENCH
REQUIRED FOR SWITCH LIST.

		09-372AM	MTPE	SCMP	PANEL 377 --------- GLY TO RAD SEC VLV - BYPASS	*1
		09-372AN			PANEL 379 --------- PRIM ACCUM FILL VLV - OFF	*1
		09-372AO			PANEL 378 --------- PRIM GLY ACCUM VLV - (ON - CCW)	*1
		09-372AP			PANEL 382 --------- OPEN COVER SUIT HT PRIM GLY VLV - FLOW SUIT FLOW RELF VLV - OFF PRIM GLY EVAP IN TEMP VLV - MIN SUIT HT SEC GLY VLV - FLOW EVAP H2O CONT PRIM VLV - OFF SEC VLV - OFF H2O ACCUM 1 VLV - OFF 2 VLV - OFF CLOSE COVER EXTEND Y -Y STRUT AND LOCK IN PLACE	*1

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-372AQ			PANEL 350 --------- OPEN COVER CO2 CANISTER DIVERT VLV - (CENTER) CLOSE COVER	*1
		09-372AR			PANEL 351 --------- MAIN REG A VLV - OPEN B VLV - OPEN H2O/GLY TK PRESS REG VLV - BOTH RELF VLV - BOTH EMER CABIN PRESS VLV - OFF CABIN REPRESS VLV - OFF (CCW)	*1
		09-372AS			PANEL 352 --------- WASTE TK SERVICING VLV - CLOSE PRESS RELF VLV - 2 POT TK IN VLV - CLOSE WASTE TK IN VLV - AUTO	*1
		09-372AT			FWD HATCH --------- PRESS EQUALIZATION VLV - CLOSE	*1
		09-372AU			PANEL 12 -------- LM/CM PRESS VLV - LM/CM DP LM/CM PRESS DIFF IND 0.0 PSI	*1
		09-372AV			PANEL 301 --------- SUIT FLOW VLV - FULL FLOW	*1
		09-372AW			PANEL 300 --------- SUIT FLOW VLV - FULL FLOW	*1

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		09-372AX			PANEL 302 --------- SUIT FLOW VLV - FULL FLOW CABIN HEAT EXCH LOUVERS - CENTERED		*1
		09-372AY			PANEL 303 --------- PRIM CAB TEMP VLV - C (CW) SEC CAB TEMP VLV - MAX COOL		*1
		09-372AZ			PANEL 304 --------- DRNK H2O SUPPLY VLV - OFF DRINK GUN SW - LOCK CLOSED		*1
		09-372BA			PANEL 100 --------- UTIL PWR SW - OFF FLOOD DIM SW - 1 FIXED SW - OFF G/N PWR OPTICS SW - OFF IMU SW - (ON-UP) RNDZ XPNDR SW - OFF LEB LT NUMERICS CONT - AS REQ'D INTGL CONT - OFF FLOOD CONT - OFF	 100S006 100S005 100S004 100S001 100S002 100S003	*1

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-372BB			PANEL 306		*1
					MSN TIMER SW - RESET, REL	306S005	
					MSN TIMER IND ZERO		
					MSN TIMER SW - START	306S005	
					MSN TIMER IND COUNTING UP		
					MSN TIMER		
					HRS SW - CENTER	306S006	
					MIN SW - CENTER	306S007	
					SEC SW - CENTER	306S008	
					EVENT TIMER		
					START SW - STOP THEN (CENTER)	306S001	
					RESET SW - RESET, REL	306S002	
					IND ZERO		
					MIN SW - CENTER	306S003	
					SEC SW - CENTER	306S004	
		09-372BC			PANEL 101		*1
					SYS TEST SEL (LH) - 5	101S001	
					SYS TEST SEL (RH) - A	101S002	
					SYS TEST IND VDC		1.5 -2.3 (60-92 DEG)
					SYS TEST SEL (LH) - 4	101S001	
					SYS TEST SEL (RH) - B	101S002	
					RNDZ XPNDR SW - OPERATE	101S006	
					CM RCS HTRS SW - OFF	101S003	
					WASTE H2O DUMP SW - HTR A	101S005	
					URINE DUMP SW - HTR A	101S004	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-372BD			PANEL 122		*1

					OPTICS		
					ZERO SW - ZERO	122S003	
					TELE TRUN SW - SLAVE TO SXT	122S001	
					MODE SW - MAN	122S002	
					COUPLING SW - DIRECT	122S004	
					SPEED SW - LO	122S005	
					CONDITION LAMPS SW - ON	122S012	
					UP TLM SW - ACCEPT	122S010	
					SXT HAND CONTR (OHC) - NEUTRAL		
					RETICLE BRIGHTNESS TW - AS REQD		
					ATT IMP CONT - NEUTRAL	122S008	
					MARK PB - AS IS	122S006	
					MARK REJECT PB - AS IS	122S007	
		09-372BE			PANEL 180		*1

					S-BND SQ SW - ENABLE	180S001	
		09-372BF			PANEL 225		*1

					ALL CB'S - CLOSED EXCEPT..		
					HI GAIN ANT		
					FLT BUS CB - OPEN	225C005	
					GRP 2 CB - OPEN	225C006	
		09-372BG			PANEL 226		*1

					ALL CB'S - CLOSED EXCEPT..		
					FC 1 REACS CB - OPEN	226C004	
					FC 2 REACS CB - OPEN	226C005	
					FC 3 REACS CB - OPEN	226C006	
					FC 1 RAD CB - OPEN	226C013	
					FC 2 RAD CB - OPEN	226C014	
					FC 3 RAD CB - OPEN	226C015	
					LTG COAS/TUNNEL		
					MNA CB - CLOSE	226C028	
					MNB CB - OPEN	226C029	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-372BH			PANEL 229	*1

					ALL CB'S CLOSED EXCEPT..	
					MAIN REL	
					PYRO A CB - OPEN 229C048	
					PYRO B CB - OPEN 229C049	
					O2 VAC ION PUMPS	
					MN A CB - OPEN 229C050	
					MN B CB - OPEN 229C051	
		09-372BI			PANEL 250	*1

					CAUTION	
					PYRO A AND B TIE TO BAT BUS A AND B CB'S (2) SHOULD NEVER BE CLOSED WHEN PYRO A AND B SEQ A AND B CB'S (2) ARE CLOSED. LOSS OF PYRO BATTERY POWER COULD RESULT.	
					ALL CB'S - CLOSED EXCEPT..	
					PYRO A BAT A TO PYRO BUS TIE CB - OPEN 250C018	
					PYRO B BAT B TO PYRO BUS TIE CB - OPEN 250C019	
					BAT C TO BAT BUS A CB - OPEN 250C015	
					BAT C TO BAT BUS B CB - OPEN 250C024	
					PANEL 251	

					OVBD DRAIN VLV - OFF	
					PANEL 252	

					BAT VENT VLV - CLOSED	
					WASTE STOWAGE VLV - VENT	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-372BJ	MTPE	MSTC	LEB CLOSEOUT SWITCH LIST COMPLETE		*1
		09-372BK	MTPE	SCMP	MOVE TO LH COUCH.		*1
		09-372BL	MTPE	MTPE SCDR SLMP MNQC	PERFORM MDC SWITCHLIST ON CH 222. REPORT COMPLETION.		*1
					NOTE ALL SYSTEMS MONITOR		
		09-372BM	MTPE	SCDR	PANEL 601 --------- REPRESS 02 VLV - CLOSE		*1
		09-372BN			PANEL 13 -------- FDAI 1 SW - INRTL FDAI 2 SW - INRTL EARTH/LUNAR SW - PWR OFF ALT SET CONT - 100 (APPROX) LTG SW - OFF MODE SW - HOLD/FAST SLEW SW - (OFF-CENTER)	 013S004 013S005 013S001 013S006 013S002 013S003	*1
		09-372BO			THC - NEUTRAL AND LOCKED ---		*1
		09-372BP			RHC 2 - LOCKED -----		*1
		09-372BQ			PANEL 375 --------- SURGE TK PRESS RELF VLV - AUTO (OPEN)		*1
		09-372BR			PANEL 376 --------- PLVC SW - NORMAL	 376S002	*1

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-372BS			PANEL 380		*1
					02 DEMAND REG VLV - BOTH		
					SUIT TEST VLV - OFF		
					SUIT RET AIR VLV - PUSH CLOSE		
		09-372BT			PANEL 325		*1
					PRIM GLY TO RAD VLV - (PUSH - NORMAL)		
					CABIN RELIEF VLV (LH) - BOOST ENT		
					CABIN RELIEF VLV (RH) - BOOST ENT (SAFETY LATCH OFF)		
		09-372BU			PANEL 326		*1
					GLY RSVR		
					IN VLV - OPEN		
					OUT VLV - OPEN		
					BYPASS VLV - CLOSE		
					02 SM SUPPLY VLV - ON		
					02 SURGE TK VLV - ON		
					02 REPRESS PKG VLV - ON		
		09-372BV			PANEL 15		*1
					COAS PWR SW - OFF	015S006	
					UTIL PWR SW - OFF	015S005	
					PL BCN LT SW - CENTER	015S003	
					PL DYE MARKER SW - (OFF-DOWN), GUARDED	015S002	
					PL VENT SW - OFF	015S004	
		09-372BW			PANEL 8		*1
					ALL CB'S - CLOSED EXCEPT FOLLOWING..		
					SECS		
					LOGIC A CB - OPEN	008C003	
					LOGIC B CB - OPEN	008C004	
					ARM A CB - OPEN	008C001	
					ARM B CB - OPEN	008C002	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
					SPS	
					PITCH 1 BAT A - OPEN 008C031	
					YAW 1 BAT A - OPEN 008C033	
					8 GUARDED CIRCUIT BREAKERS - OPEN	
					NOTE	
					FOLLOWING BREAKERS ARE GUARDED	
					RCS PROP ISOL	
					MN A CB - OPEN (GUARDED) 008C041	
					MN B CB - OPEN (GUARDED) 008C042	
					SCS DIRECT ULL	
					MN A CB - OPEN (GUARDED) 008C072	
					MN B CB - OPEN (GUARDED) 008C073	
					SPS HE VLV	
					MN A CB - OPEN (GUARDED) 008C029	
					MN B CB - OPEN (GUARDED) 008C030	
					PILOT VLV	
					MN A CB - OPEN (GUARDED) 008C068	
					MN B CB - OPEN (GUARDED) 008C069	
					(PANEL 8 SWITCHES)	
					AUTO RCS SELECT	
					A/C ROLL A1 SW - OFF 008S017	
					A/C ROLL C1 SW - OFF 008S018	
					A/C ROLL A2 SW - OFF 008S019	
					A/C ROLL C2 SW - OFF 008S020	
					B/D ROLL B1 SW - OFF 008S021	
					B/D ROLL D1 SW - OFF 008S022	
					B/D ROLL B2 SW - OFF 008S023	
					B/D ROLL D2 SW - OFF 008S024	
					PITCH A3 SW - OFF 008S025	
					PITCH C3 SW - OFF 008S026	
					PITCH A4 SW - OFF 008S027	
					PITCH C4 SW - OFF 008S028	
					YAW B3 SW - OFF 008S029	
					YAW D3 SW - OFF 008S030	
					YAW B4 SW - OFF 008S031	
					YAW D4 SW - OFF 008S032	
					FLOOD	
					DIM SW - 1 008S012	
					FIXED SW - OFF 008S013	
					FLOAT BAG	
					1 SW - VENT 008S004	
					2 SW - VENT 008S005	
					3 SW - VENT 008S006	
					SECS	
					LOGIC 1 SW - OFF 008S011	
					LOGIC 2 SW - OFF 008S015	
					PYRO ARM A - SAFE 008S010	

TIME	COMM CH	COMM SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
					PYRO ARM B SW - SAFE	008S014	
					INTERIOR LT		
					NUMERICS CONT - AS REQ'D		
					FLOOD CONT - OFF		
					INTGL CONT - OFF		
					09-372BX		
					PANEL 7		*1

					EDS PWR SW - OFF	007S001	
					SCS		
					TVC SERVO PWR 1 SW - OFF	007S008	
					TVC SERVO PWR 2 SW - OFF	007S009	
					FDAI/GPI PWR SEL - BOTH	007S003	
					LOGIC PWR 2/3 SW - (ON-UP)	007S010	
					ELEC PWR SEL - ECA		
					SIG COND/DR BIAS PWR		
					1 SW - AC1	007S011	
					2 SW - AC2	007S012	
					BMAG PWR		
					1 SEL - WARM UP	007S006	
					2 SEL - WARM UP	007S007	
					DIRECT 02 VLV - AS IS		
					09-372BY		
					PANEL 1		*1

					SET ALTIMETER INDEX - 3300		
					EMS FUNCTION SEL - OFF		
					EMS GTA SW - (DOWN) (COVER)		
					EMS GTA NULL ADJ - AS IS		
					EMS MODE SW - STBY		
					EMS DV/EMS SET SW - AS IS		
					CMC ATT SW - IMU	001S002	
					ACCELEROMETER - +1G		
					FDAI		
					SCALE SW - 5/1	001S003	
					SEL SW - 1/2	001S004	
					SOURCE SW - CMC	001S005	
					ATT SET SW - GDC	001S006	
					MAN ATT		
					ROLL SW - RATE CMD	001S007	
					PITCH SW - ACCEL CMD	001S008	
					YAW SW - RATE CMD	001S009	
					LIMIT CYCLE SW - OFF	001S010	
					ATT DEADBAND SW - MIN	001S011	
					RATE SW - HIGH	001S012	
					TRANS CONTR PWR SW - ON-UP	001S066	

TIME	COMM Cm	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
					ROT CONTR PWR	
					NORM 1 SW - AC/DC	001S064
					NORM 2 SW - AC/DC	001S065
					DIRECT 1 SW - OFF	001S013
					DIRECT 2 SW - OFF	001S067
					SC CONT SW - SCS	001S018
					CMC MODE SW - FREE	001S019
					LV/SPS IND ALPHA SW - ALPHA	001S052
					LV ALPHA/SPS PC IND - ZERO	
					LV/SPS IND SII/SIVB SW - GPI	001S053
					NO AUTO ABORT PB - GUARDED	001S029
					APEX COVER JETT PB - GUARDED	001S030
					LES MOT FIRE PB - GUARDED	001S031
					DROGUE DEPLOY PB - GUARDED	001S032
					CANARD DEPLOY PB - GUARDED	001S033
					MAIN DEPLOY PB - GUARDED	001S034
					CSM/LV SEP PB - GUARDED	001S035
					CM RCS HE DUMP PB - GUARDED	001S060
					BMAG MODE	
					ROLL SW - RATE 2	001S020
					PITCH SW - RATE 2	001S021
					YAW SW - RATE 2	001S022
					SPS THRUST SW - NORMAL	001S023
					DIRECT ULLAGE PB - AS IS	001S024
					THRUST ON PB - AS IS	001S025
					DV THRUST	
					A SW - OFF (GUARDED)	001S026
					B SW - OFF (GUARDED)	001S059
					SPS GMBL	
					PITCH TW - 0	
					YAW TW - 0	
					ATT SET	
					ROLL TW - 162	
					PITCH TW - 90	
					YAW TW - 0	
					GDC ALIGN PB - AS IS	001S037
					SCS TVC	
					PITCH SW - AUTO	001S038
					YAW SW - AUTO	001S039
					SPS GMBL MOT	
					PITCH 1 SW - OFF	001S040
					PITCH 2 SW - OFF	001S041
					YAW 1 SW - OFF	001S042
					YAW 2 SW - OFF	001S043
					DV CG SW - CSM	001S054
					ELS LOGIC SW - OFF, GUARDED	001S044
					ELS AUTO SW - (ON-UP)	001S063

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
					CM RCS LOGIC SW - OFF	001S046	
					CM PRPLNT		
					DUMP SW - OFF, GUARDED	001S047	
					PURGE SW - (DOWN) GUARDED	001S048	
					IMU CAGE SW - (OFF-DOWN),	001S049	
					GUARDED		
					ENTRY		
					EMS ROLL SW - OFF	001S050	
					.05G SW - OFF	001S051	
					TVC GMBL DR		
					PITCH SW - AUTO	001S027	
					YAW SW - AUTO	001S028	
					EVENT TIMER		
					START SW - STOP	001S056	
					THEN (CENTER)		
					RESET SW - RESET, REL	001S055	
					MIN SW - CENTER	001S057	
					SEC SW - CENTER	001S058	
					IND - 00 00		
09-372BZ	MTPE		SCDR		PANEL 2 (LH)		*1
					SUIT CABIN DP IN H20		
					02 FLOW LB/HR		
					DOCK PROBE		
					EXTD/REL A TB - GRAY		
					EXTD/REL B TB - GRAY		
					EXTD/REL SW - OFF (GUARDED)	002S001	
					RETR PRIM SW - OFF	002S002	
					RETR SEC SW - OFF	002S003	
					EXTERIOR LT		
					RUN/EVA SW - OFF	002S005	
					RNDZ SW - OFF (CENTER)	002S114	
					TUNNEL LT SW - OFF	002S006	
					LM PWR SW - OFF	002S082	
					UP TLM		
					CM SW - ACCEPT	002S021	
					IU SW - BLOCK	002S115	
					SM RCS IND SW - PRPLNT QTY	002S098	
					CM RCS PRESS SW - (OFF-DOWN)	002S031	
					GUARDED		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
					SM RCS	
					HE 1	
					A SW - (CENTER)	002S024
					B SW - (CENTER)	002S025
					C SW - (CENTER)	002S026
					D SW - (CENTER)	002S027
					A TB - BP	
					B TB - BP	
					C TB - BP	
					D TB - BP	
					HE 2	
					A SW - (CENTER)	002S034
					B SW - (CENTER)	002S035
					C SW - (CENTER)	002S036
					D SW - (CENTER)	002S037
					A TB - BP	
					B TB - BP	
					C TB - BP	
					D TB - BP	
					PRPLNT	
					A SW - (CENTER)	002S047
					B SW - (CENTER)	002S048
					C SW - (CENTER)	002S049
					D SW - (CENTER)	002S050
					SEC PRPLNT	
					A TB - BP	
					B TB - BP	
					C TB - BP	
					D TB - BP	
					PRIM PRPLNT	
					A TB - BP	
					B TB - BP	
					C TB - BP	
					D TB - BP	
					SEC PRPLNT FUEL PRESS	
					A SW - (CENTER)	002S116
					B SW - (CENTER)	002S117
					C SW - (CENTER)	002S118
					D SW - (CENTER)	002S119
					RCS IND SEL - SM A	002S028

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
					SM RCS		
					TEMP PKG IND DEG. F		75+/-30
					PRESS HE IND PSIA		LESS THAN 250
					SEC FUEL PRESS IND PSIA		LESS THAN 100
					PRPLNT QTY IND PCNT		LESS THAN 25
					IND SW - HE TK TEMP	002S098	
					HE TK TEMP DEG. F.		
					RCS IND SEL - SM B	002S028	
					SM RCS		
					TEMP PKG IND DEG. F.		75+/-30
					PRESS HE IND PSIA		LESS THAN 250
					SEC FUEL PRESS IND PSIA		LESS THAN 100
					HE TK TEMP DEG. F.		
					IND SW - PRPLNT QTY	002S098	
					PRPLNT QTY IND PCNT		LESS THAN 25
					RCS IND SEL - SM C	002S028	
					SM RCS		
					TEMP PKG IND DEG. F.		75+/-30
					PRESS HE IND PSIA		LESS TH 25
					SEC FUEL PRESS IND PSIA		LESS THAN 100
					PRPLNT QTY IND PCNT		LESS THAN 25

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
					IND SW - HE TK TEMP	002S098	
					HE TK TEMP _____ DEG. F.		
					RCS IND SEL - SM D	002S028	
					SM RCS		
					TEMP PKG IND _____ DEG. F.		75+/-30
					PRESS HE IND _____ PSIA		LESS THAN 200
					SEC FUEL PRESS IND _____ PSIA		LESS THAN 100
					HE TK TEMP _____ DEG. F.		
					IND SW - PRPLNT QTY	002S098	
					PRPLNT QTY IND _____ PCNT		LESS THAN 25
					CM RCS PRPLNT		
					1 SW - (ON-UP), REL	002S045	
					2 SW - (ON-UP), REL	002S046	
					1 TB - B/P		
					2 TB - B/P		
					RCS IND SEL - CM1	002S028	
					CM RCS		
					TEMP HE IND _____ DEG. F.		
					PRESS HE IND _____ PSIA		
					PRESS MANF IND _____ PSIA		
					RCS IND SEL - CM2	002S028	
					CM RCS		
					TEMP HE IND _____ DEG. F.		
					PRESS HE IND _____ PSIA		
					PRESS MANF IND _____ PSIA		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
					SM RCS HTRS		
					A SW - OFF	002S092	
					B SW - OFF	002S093	
					C SW - OFF	002S094	
					D SW - OFF	002S095	
					RCS CMD SW - OFF, REL	002S043	
					RCS TRNFR SW - SM, REL	002S044	
					EDS AUTO SW - OFF	002S067	
					CSM/LM FINAL SEP		
					1 SW - (OFF-DOWN), GUARDED	002S109	
					2 SW - (OFF-DOWN), GUARDED	002S112	
					CM/SM SEP		
					1 SW - (OFF-DOWN), GUARDED	002S110	
					2 SW - (OFF-DOWN), GUARDED	002S111	
					SIVB/LM SEP SW - (OFF-DOWN), GUARDED	002S108	
					ABORT SYS		
					PRPLNT SW - DUMP AUTO	002S063	
					2 ENG OUT SW - AUTO	002S064	
					LV RATES SW - AUTO	002S065	
					TWR JETT 1 SW - AUTO, GUARDED	002S066	
					TWR JETT 2 SW - AUTO, GUARDED	002S096	
					LV GUID SW - IU	002S069	
					LV SII/SIVB SW - OFF, GUARDED	002S068	
					LV XLUNAR SW - INJECT	002S070	
					MAIN REL SW - (OFF-DOWN), GUARDED	002S071	
		09-372CA	MTPE	SLMP	PANEL 600		*1
					EMER 02 VLV - CLOSE		
		09-372CB			PANEL 602		*
					REPRESS 02		
					RELF VLV - OPEN (AUTO)		
					PRESS IND PSIG		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-372CC			RHC 1 - LOCKED		*1
		09-372CD			PANEL 227		*1
					SCI INST PWR SW - OFF	227S001	
		09-372CE			PANEL 16		*1
					DOCK TRGT SW - OFF	016S001	
					UTIL PWR SW - OFF	016S003	
					COAS PWR SW - OFF	016S002	
		09-372CF			PANEL 275		*1
					ALL CB'S CLOSED EXCEPT..		
					MNA BAT C CB - OPEN	275C011	
					MNB BAT C CB - OPEN	275C012	
					FLT/PL		
					BAT BUS A CB - OPEN	275C007	
					BAT BUS B CB - OPEN	275C008	
					BAT C CB - OPEN	275C013	
		09-372CG			PANEL 276		*1
					ALL CB'S - CLOSED		
		09-372CH			PANEL 278		*1
					ALL CB'S - CLOSED		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-372CI			PANEL 5		*1
					FC PUMPS		
					1 SW - OFF	005S001	
					2 SW - OFF	005S002	
					3 SW - OFF	005S003	
					G/N PWR SW - AC1	005S012	
					MN BUS TIE		
					BAT A/C SW - OFF	005S004	
					BAT B/C SW - OFF	005S005	
					BAT CHGR SW - AC1	005S006	
					NON ESS BUS SW - MNB	005S009	
					INTERIOR LT		
					INTGL CONT - OFF		
					FLOOD CONT - OFF		
					FLOOD DIM SW - 1	005S010	
					FLOOD FIXED SW - OFF	005S011	
					ALL CB'S CLOSED EXCEPT..		
					INST		
					SCI EQUIP SEB 1 CB - OPEN	005C023	
					SCI EQUIP SEB 2 CB - OPEN	005C024	
					SCI EQUIP HATCH CB - OPEN	005C025	
					WASTE H2O/UR DUMP		
					MNA CB - OPEN	005C050	
					MNB CB - OPEN	005C051	
		09-372CJ			PANEL 4		*1
					SPS GAUGING SW - AC1	004S003	
					TELE COM		
					GRP 1 SW - AC1	004S004	
					GRP 2 SW - AC2	004S005	
					ECS GLY PUMPS SEL - 1AC 1	004S002	
					SUIT COMPR		
					1 SW - OFF	004S006	
					2 SW - OFF	004S007	
					ALL CB'S CLOSED		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-372CK			PANEL 3	*1
					FC RAD	
					1 SW - CENTER	003S002
					2 SW - CENTER	003S003
					3 SW - CENTER	003S004
					1 TB - GRAY	
					2 TB - GRAY	
					3 TB - GRAY	
					FC HTRS	
					1 SW - OFF	003S006
					2 SW - OFF	003S007
					3 SW - OFF	003S008
					FC PURGE	
					1 SW - OFF (CENTER)	003S011
					2 SW - OFF (CENTER)	003S012
					3 SW - OFF (CENTER)	003S013
					FC REAC	
					1 SW - CENTER	003S020
					2 SW - CENTER	003S021
					3 SW - CENTER	003S022
					1 TB - GRAY	
					2 TB - GRAY	
					3 TB - GRAY	
					FC MN BUS A	
					1 SW - OFF	003S014
					2 SW - OFF	003S015
					3 SW - OFF	003S016
					1 TB - BP	
					2 TB - BP	
					3 TB - BP	
					MN BUS A RESET SW - (CENTER)	003S017
					FC MN BUS	
					1 SW - OFF	003S023
					2 SW - OFF	003S024
					3 SW - OFF	003S025
					1 TB - BP	
					2 TB - BP	
					3 TB - BP	
					MN BUS B RESET - (CENTER)	003S026

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION			REMARKS
					FC IND SEL - 1		003S010	
					FC FLOW H2 IND	LB/HR		.20 MAX
					FC FLOW 02 IND	LB/HR		.60 MAX
					FC MODL TEMP SKIN IND DEG. F.			ENGR INFO
					FC MODL TEMP COND EXH IND DEG. F.			LOWER LIMITS
					PH HI TB - GRAY			
					FC RAD TEMP LOW TB - GRAY			
					FC IND SEL - 2		003S010	
					FC FLOW H2 IND	LB/HR		.20 MAX
					FC FLOW 02 IND	LB/HR		.60 MAX
					FC MODL TEMP SKIN IND DEG. F.			ENGR INFO
					FC MODL TEMP COND EXH IND DEG. F.			LOWER LIMITS
					PH HI TB - GRAY			
					FC RAD TEMP LOW TB - GRAY			
					FC IND SEL - 3		003S010	
					FC FLOW H2 IND	LB/HR		.20 MAX
					FC FLOW 02 IND	LB/HR		.60 MAX
					FC MODL TEMP SKIN IND DEG. F.			ENGR INFO
					FC MODL TEMP COND EXH IND DEG. F.			LOWER LIMITS
					PH HI TB - GRAY			
					FC RAD TEMP LOW TB - GRAY			
					BAT CHARGE SEL - OFF		003S028	
					DC IND SEL - FUEL CELL 1		003S027	
					DC AMPS IND	AMPS		LOWER LIMITS

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
					DC IND SEL - FUEL CELL 2	003S027	
					DC AMPS IND AMPS		LOWER LIMITS
					DC IND SEL - FUEL CELL 3	003S027	
					DC AMPS IND AMPS		LOWER LIMITS
					DC IND SEL - MAIN BUS A	003S027	
					DC VOLTS IND VDC		29 +/- 2
					DC IND SEL - MAIN BUS B	003S027	
					DC VOLTS IND VDC		29 +/- 2
					DC IND SEL - BAT BUS A	003S027	
					DC VOLTS IND VDC		35.5 +/- 2.5
					DC AMPS IND AMPS		3 MAX
					DC IND SEL - BAT BUS B	003S027	
					DC VOLTS IND VDC		35.5 +/- 2.5
					DC AMPS IND AMPS		3 MAX
					DC IND SEL - BAT C	003S027	
					DC VOLTS IND VDC		35.5 +/- 2.5
					DC AMPS IND AMPS		3 MAX
					DC IND SEL - PYRO A	003S027	
					DC VOLTS IND VDC		35.5 +/-2.5
					DC IND SEL - PYRO B	003S027	
					DC VOLTS IND VDC		35.5 +/-2.5
					DC IND SEL - MAIN BUS A	003S027	
					INV 1 SW - MNA	003S057	
					INV 2 SW - MN B	003S058	
					INV 3 SW - OFF	003S059	
					INV 1 AC BUS 1 SW - (ON-UP)	003S060	
					INV 2 AC BUS 1 SW - OFF	003S061	
					INV 3 AC BUS 1 SW - OFF	003S062	
					AC BUS 1 RESET SW - (CENTER)	003S063	
					INV 1 AC BUS 2 SW - OFF	003S064	
					INV 2 AC BUS 2 SW - (ON - UP)	003S065	
					INV 3 AC BUS 2 SW - OFF	003S066	
					AC BUS 2 RESET SW - (CENTER)	003S067	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
					AC IND SEL - BUS 1 PH A	003S068	
					AC VOLTS IND VAC		115 +/- 5
					AC IND SEL - BUS 1 PH B	003S068	
					AC VOLTS IND VAC		115 +/- 5
					AC IND SEL - BUS 1 PH C	003S068	
					AC VOLTS IND VAC		115 +/- 5
					AC IND SEL - BUS 2 PH A	003S068	
					AC VOLTS IND VAC		115 +/- 5
					AC IND SEL - BUS 2 PH B	003S068	
					AC VOLTS IND VAC		115 +/- 5
					AC IND SEL - BUS 2 PH C	003S068	
					AC VOLTS IND VAC		115 +/- 5
					SPS PRPLNT TK TEMP IND DEG. F.		60 - [redacted]
					SPS PRPLNT TK PRESS FUEL IND PSIA		130 MAX
					SPS PRPLNT TK PRESS OXID IND PSIA		130 MAX
					SPS PRESS IND SW - HE	003S069	
					SPS PRPLNT TK PRESS HE IND PSIA		300 MAX
					SPS PRESS IND SW - N2A	003S069	
					SPS PRPLNT PRESS N2 IND PSIA		2900MAX
					SPS PRESS IND SW - N2B	003S069	
					SPS PRPLNT TK PRESS N2 IND PSIA		2900MA
					SPS ENG INJ VLV A1 IND - CLOSE A2 IND - CLOSE B3 IND - CLOSE B4 IND - CLOSE		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
					SPS QTY	
					OXID FLOW VLV TB (UPPER) - GRAY	
					OXID FLOW VLV TB (LOWER) - GRAY	
					TEST SW - (CENTER)	003S101
					OXID FLOW VLV	
					INCR SW - NORM	003S104
					PRIM SW - PRIM	003S103
					PUG MODE SW - NORM	003S102
					SPS HE VLV	
					1 TB - BP	
					2 TB - BP	
					1 SW - AUTO	003S018
					2 SW - AUTO	003S019
					SPS LINE HTRS SW - (OFF-CENTER)	003S075
					SPS PRESS IND SW - HE	003S069
					VHF ANT SEL - SM LEFT	003S001
					S-BAND NORM	
					XPNDR SW - OFF	003S029
					PWR AMPL PRIM SW - PRIM	003S031
					PWR AMPL HI SW - (CENTER)	003S032
					MODE	
					VOICE SW - VOICE	003S033
					PCM SW - PCM	003S034
					RNG SW - RANGING	003S035
					S BAND AUX	
					TAPE SW - (OFF-CENTER)	003S036
					TV SW - (OFF-CENTER)	003S037
					UP TLM	
					DATA SW - DATA	003S038
					CMD SW - OFF	003S039
					PWR AMPL TB - BP	
					TAPE MOTION TB - BP	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
					S BAND ANT		
					OMNI A SW - B	003S041	
					OMNI SW - OMNI	003S040	
					VHF AM		
					SQUELCH A TW - AS IS		
					SQUELCH B TW - AS IS		
					A SW - (OFF-CENTER)	003S043	
					B SW - (OFF-CENTER)	003S044	
					RCV ONLY SW - (OFF-CENTER)	003S071	
					VHF BCN SW - OFF	003S045	
					VHF RNG SW - OFF	003S078	
					FC REACS VLV SW - NORM	003S076	
					H2 PURGE LINE HTR SW - OFF	003S077	
					TAPE RCDR		
					PCM/ANLG SW - PCM/ANLG	003S049	
					RCD SW - RECORD	003S050	
					FWD SW - REWIND	003S051	
					NOTE		
					ALLOW TAPE TO RUN TO E.O.T. TAPE RCDR		
					FWD SW - (OFF - CENTER)	003S051	
					PWR SCE SW - NORM	003S052	
					PWR PMP SW - NORM	003S053	
					PCM BIT RATE SW - HIGH	003S055	
	09-372CL	MTPE	SLMP		PANEL 2 (RH)		*1
					MSN TIMER SW - RESET, REL	002S100	
					MSN TIMER IND ZERO		
					MSN TIMER SW - START	002S100	
					MSN TIMER IND COUNTING UP		
					MSN TIMER		
					HRS SW - (CENTER)	002S101	
					MIN SW - (CENTER)	002S102	
					SEC SW - (CENTER)	002S103	

CODE	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION			REMARKS
					C/W			
					NORMAL SW - ACK		002S007	
					CSM SW - CSM		002S008	
					PWR SW - 1		002S009	
					LAMP TEST SW - (CENTER)		002S079	
					PL VENT VLV CONT - (PUSH, LOCK)			
					CRYO TK			
					PRESS H2 1 IND	PSIA		ENGR
					-----			INFO
					PRESS H2 2 IND	PSIA		ENGR
					-----			INFO
					02 PRESS IND SW - SURGE TANK		002S016	
					CRYO TK PRESS 02 1 IND	PSIA		ENGR
					-----			INFO
					02 PRESS IND SW - TK 1		002S016	
					CRYO TK			
					PRESS 02 1 IND	PSIA		ENG
					-----			INFO
					PRESS 02 2 IND	PSIA		ENG
					-----			INFO
					QTY H2 1 IND	PCNT		ENG
					-----			INFO
					QTY H2 2 IND	PCNT		ENG
					-----			INFO
					QTY 02 1 IND	PCNT		ENG
					-----			INFO
					QTY 02 2 IND	PCNT		ENG
					-----			INFO
					CABIN FAN			
					1 SW - (ON - UP)		002S029	
					2 SW - (ON - UP)		002S030	
					TIME			

					H2 HTRS			
					1 SW - OFF		002S012	
					2 SW - OFF		002S013	
					02 HTRS			
					1 SW - OFF		002S014	
					2 SW - OFF		002S015	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
					H2 FANS		
					1 SW - OFF (CENTER)	002S017	
					2 SW - OFF (CENTER)	002S018	
					O2 FANS		
					1 SW - OFF (CENTER)	002S019	
					2 SW - OFF (CENTER)	002S020	
					ECS IND SEL - PRIM	002S089	
					ECS RAD TEMP PRIM/SEC IN IND DEG. F. -----		
					ECS RAD TEMP PRIM OUT IND DEG. F. -----		
					GLY EVAP PRIM TEMP OUT IND DEG. F. -----		
					GLY EVAP STEAM PRESS IND PSIA -----		
					GLY DISCH PRESS IND ----- PSIG		60 MAX
					TEMP SUIT IND ----- DEG. F.		
					TEMP CABIN IND ----- DEG. F.		
					PRESS SUIT IND ----- PSIA		
					PRESS CABIN IND ----- PSIA		
					CO2 PART PRESS IND ----- MMHG		
					ECS RAD		
					FLOW CONT AUTO SW - AUTO	002S084	
					TB - GRAY		
					FLOW CONT PWR - (CENTER)	002S085	
					MAN SEL SW - RAD 1	002S086	
					HTR PRIM SW - OFF	002S087	
					HTR SEC SW - OFF	002S088	
					SUIT COMPR DP IND ----- PSI		
					ACCUM PRIM/SEC QTY IND PCNT -----		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
					H2O QTY IND SW - WASTE	002S056
					H2O QTY IND PCNT	

					H2O QTY IND SW - POT	002S056
					H2O QTY IND PCNT	

					POT H2O HTR SW - OFF	002S042
					SUIT CKT	
					H2O ACCUM AUTO SW - (CENTER)	002S051
					H2O ACCUM ON SW - CENTER	002S052
					HEAT EXCH SW - CENTER	002S057
					SEC COOL LOOP	
					EVAP SW - RESET FOR 58 SEC	002S053
					MINIMUM, THEN (OFF CENTER)	
					PUMP SW - (OFF CENTER)	002S054
					GLY EVAP	
					TEMP IN SW - MAN	002S061
					STEAM PRESS AUTO SW - MAN	002S059
					STEAM PRESS INCR SW - INCR,	002S060
					FOR 58 SEC MINIMUM, THEN	
					DEC 8.5 +/- .5 SEC, THEN REL	
					H2O FLOW SW - (OFF CENTER)	002S058
					CABIN TEMP	
					SW - MAN	002S062
					TW - MAX DECR	
					HIGH GAIN ANT	
					PWR SW - OFF	002S076
					TRACK SW - AUTO	002S077
					BEAM SW - WIDE	002S090
					PITCH IND - DEG.	

					YAW IND - DEG.	

					PITCH POS CONT - AS IS	
					YAW POS CONT - AS IS	
					SERVO ELEC SW - PRIM	002S083
		09-372CM			SIDE HATCH AREA	

					CABIN PRESS DUMP VLV - CLOSE (CW)	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-372CN	MTPE	MSTC	MDC SWITCHLIST COMPLETE.	*1
-09 30		09-372CO	MSTC	CTSC	VERIFY CIF MSO CSM PCM HARDLINE IS OPERATIONAL.	*1
		09-372CP	MSTC	CVTS	1. VERIFY CLEARANCE FOR SC RF..	*1
					S-BAND VHF-AM	
					2. CSM CMD DECODER IS OFF	
					3. HAVE GMIL AND HFLT PROVIDE SUPPORT ON CH 212.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-372CQ	MTPE	SLMP	PANEL 3		*1
					S BAND NORM XPNDR SW - PRIM	003S029	
					S BAND NORM PWR AMPL HI SW - HIGH	003S032	
					VHF AM B SW - DUPLEX	003S044	
				SLMP	S-BAND PA TB - GRAY (90 SEC DELAY)		
		09-372CQ	MSTC	GMIL	1. VERIFY 2-WAY LOCK (AFTER 90 SEC) AT -70 DBM.		MODE *1 6.2.0
					2. VERIFY READY FOR A/G VOICE CHECKS ON S-BAND AND VHF-AM DUPLEX B		
					3. ENABLE ACS S-BAND AND VHF-AM DUPLEX B CIRCUITS		
					4. VERIFY SYNC ON A/B PCM.		
		09-372CS	MTPE	SLMP	VERIFY S-BAND ANT IND GREATER THAN 1/3 SCALE.		*1
		09-372CT	MSTC	HFLT	VERIFY READY FOR A/G VOICE CHECKS		*1
		09-372CU	MTPE	CSTO	1. PUT CH 223 ON UMBILICAL		*1
					2. PUT CSM S/C TC ON S-BAND		
	222	09-372CV	MTPE	SCDR	PANEL 9		*1
					MODE SW - ICOM/PTT	009S001	
					PAD COMM SW - T/R	009S003	
					PWR SW - AUDIO/TONE	009S006	
					SUIT PWR SW - (ON-UP)	009S007	
					INTERCOM SW - T/R	009S005	
					VHF AM SW - T/R	009S004	
					S BAND SW - T/R	009S002	
					AUDIO CONTROL SW - NORM	009S008	
					MASTER VOLUME TW - 5		
					VHF RNG RESET SW - NORMAL	009S009	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-372CW	MTPE	SCMP	PANEL 10		*1
					MODE SW - ICOM/PTT	010S001	
					PAD COMM SW - T/R	010S003	
					PWR SW - AUDIO/TONE	010S006	
					SUIT PWR SW - (ON-UP)	010S007	
					INTERCOM SW - T/R	010S005	
					VHF AM SW - T/R	010S004	
					S BAND SW - T/R	010S002	
					AUDIO CONTROL SW - NORM	010S008	
					MASTER VOLUME TW - 5		
		09372CX	MTPE	SLMP	PANEL 6		*1
					MODE SW - ICOM/PTT	006S001	
					PAD COMM SW - T/R	006S003	
					PWR SW - AUDIO/TONE	006S006	
					SUIT PWR SW - (ON-UP)	006S007	
					INTERCOM SW - T/R	006S005	
					VHF AM SW - T/R	006S004	
					S BAND SW - T/R	006S002	
					AUDIO CONTROL SW - NORM	006S008	
					MASTER VOLUME TW - 5		
		09-372CY	MTPE	SCDR SLMP	REPLACE OIS HEADSETS WITH ASTRO HEADSET.		*1
		09-372CZ	MTPE	MSTC CSTO MCSE MNQC	REPORT TO CH. 212 FOR COMM CKS		*1
		09-372DA	MSTC	SCDR SLMP	PERFORM PAD COMM CHECK (VIA UMBILICAL CH 223) ADJUST PAD COMM VOLUME LEVEL. ADJUST VHF AM A SQUELCH AS REQ'D FOR MIN NOISE AND INCREASE TW ONE NUMBER. RECORD TW SETTING . PAD COMM TW - SCDR _____ SLMP _____ .		*1
		09-372DB	MSTC	CSTO	RELEASE UMBILICAL.		*1
		09-372DC	MSTC	SCDR SLMP	PERFORM COMM CHECK ON CH 212 (VIA S BAND). ADJUST S-BAND VOLUME LEVEL. REPORT TW SETTING SCDR _____ SLMP _____		*1

TIME	COMM CH SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
	09-372DD	MSTC	CSTO	1. PUT CH 214 ON VHF 2. RELEASE S-BAND	*1
	09-372DE	MSTC	SCDR SLMP	PERFORM COMM CHECK ON CH 214 (VIA VHF AM) ADJUST VHF AM VOLUME LEVEL. REPORT TW SETTING SCDR ----- SLMP -----	*1
	09-372DF	MSTC	CSTO	1. PUT CH 214 ON UMBILICAL. 2. RELEASE VHF	*1
	09-372DG	MSTC	SCDR	1. RETURN TO OIS HEADSETS. 2. REPORT TO MTPE ON CH 222	*1
	09-372DH	MSTC	SLMP	DON SCMP COMM CARRIER HEADSET.	*1
	09-372DI	MSTC	GMIL	CONFIGURE UP VOICE B/U MODE 8.2.0.	*1
	09-372DJ	MSTC	SLMP	PANEL 3 UP TLM DATA SW - UP VOICE B/U ESTABLISH 2-WAY COMM WITH HFLT ON S-BAND.	*1
	09-372DK	MSTC	HFLT	VERIFY UP VOICE B/U CHECKS COMPLETE.	*1
	09-372DL	MSTC	SLMP	PANEL 3 UP TLM DATA SW - DATA	*1
	09-372DM	MSTC	GMIL	CONFIGURE FOR DN VOICE B/U MODE 6.16.0.	*1
	09-372DN	MSTC	SLMP	PANEL 3 S-BND AUX TAPE SW - DN VOICE B/U ESTABLISH 2-WAY COMM WITH HFLT ON S-BAND.	*1
	09-372DO	MSTC	HFLT	VERIFY DN VOICE B/U CHECK COMPL.	*1
	09-372DP	MSTC	SLMP	PANEL 3 S-BND AUX TAPE SW - OFF	*1
	09-372DQ	MSTC	GMIL	CONFIGURE FOR S-BND MODE 6.2.0.	*1
	09-372DR	MSTC		PERFORM 2-WAY VOICE CHECK WITH SCMP USING VHF BACK-UP TRANSCEIVER	*1

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-372DS	MSTC	HFLT	PERFORM COMM CHECK WITH SCMP ON VHF.	*1
		09-372DT	MSTC	HFLT	PERFORM COMM CHECK WITH SCMP ON S-BAND.	*1
		09-372DU	MSTC	GMIL	1. DISABLE S-BAND ACS UPLINK. 2. ENABLE VHF/S-BAND SIMUL CAPABILITY. 3. ENABLE VHF U/L CONSTANT KEY.	*1
		09-372DV	MSTC		RELEASE AUDIO PUSH BUTTONS AND PERFORM 2-WAY VOICE COMM WITH SLMP USING EMER UMB.	*1
		09-372DW	MSTC	CSTO	PUT S-BAND ON CH 212. PUT VHF ON CH 214.	*1
	214	09-372DX	MSTC		PERFORM 2-WAY VOICE COMM CHECK WITH SCMP ON CH 214.	*1
	214	09-372DY	MSTC	MTPE	VERIFY SCMP VOICE ON CH 212	*1
		09-372DZ	MSTC	HFLT	PERFORM COMM CHECK WITH SCMP ON VHF AND S-BAND SIMULTANEOUSLY.	*1
		09-372EA	MSTC	GMIL	1. RELEASE VHF/S-BAND SIMUL CAPABILITY. 2. RELEASE VHF U/L CONSTANT KEY.	*1
		09-372EB	MSTC	SLMP	RETURN TO OIS HEADSET. REPORT TO MTPE ON CH 222	*1
		09-372EC	MSTC	CSTO	RELEASE UMBILICAL.	*1
		09-372ED	MTPE	SCDR	PANEL 9	*1
					SUIT PWR SW - OFF 009S007 PWR SW - OFF 009S006 DISCONNECT ASTRO HEADSET AND HAND TO SPAD. DISCONNECT CWG ELECTRICAL ADAPTER FROM CCU.	
		09-372EE	MTPE	SCMP	PANEL 10	*1
					SUIT PWR SW - OFF 010S007 PWR SW - OFF 010S006 MASTER VOL TW - 6 INT VOL TW - 6 S-BND VOL TW - 6 VHF VOL TW - 7	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
					DISCONNECT ASTRO HEADSET AND HAND TO SPAD. DISCONNECT CWG ELECTRICAL ADAPTER FROM CCU.		
		09-372EF	MTPE	SLMP	PANEL 6		*1
					SUIT PWR SW - OFF	006S007	
					PWR SW - OFF	006S006	
					DISCONNECT ASTRO HEADSET AND HAND TO SPAD. DISCONNECT CWG ELECTRICAL ADAPTER FROM CCU.		
		09-372EG	MTPE	SCMP	PANEL 100		*1
					LEB LT NUMERICS CONT - OFF		
		09-372EH	MTPE	SCDR	PANEL 8		*1
					INT NUMERICS CONT - OFF		
				MEPE	HR _____ MIN _____ SEC _____		
		09-372EI	MTPE	SLMP	PANEL 226		*1
					NUM/INTG LTG LEB AC 2 CB - OPEN	226C033	
					NUM/INTG LTG LMDC AC 1 CB - OPEN	226C037	
		09-372EJ	MTPE	SCMP	STOW 3 EA. CWG ADAPTERS IN DETA CONTAINERS IN COMPT A8.		*1
-09 05		09-372EK	MTPE	SLMP	EGRESS FROM COMMAND MODULE		*1
		09-372EL	MTPE	SCMP SPAD	PREP CABIN FOR FLIGHT CREW INGRESS.		*1
		09-372EM			DELETED		*1
-09 00		09-372EN	MTPE	SPAD	CLEAR PAD OF ALL NON-ESSENTIAL SC PERSONNEL		*1
					NOTE		
					ESSENTIAL PERSONNEL ARE..		
					SA-9 PAD APRON		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
					SPAD VEHICLE DRIVER (1) SLMP SCMP +80 FT SCMT ------ SNQC UGCU SGQC UWGR	
		09-372EO	SCMP		PROCEEDS AS FOLLOWS..	*1
					1. CREW ASSIST BAR ON MDC EXTENDED AND LOCKED 2. COUCH HEAD RESTS IN VENTILATED SUIT POSITION 3. THC ARM REST IN LAUNCH POSITION AND LOCKED. 4. COUCH INBOARD ARM RESTS/ CONTROLLERS STOWED AND LOCKED 5. CREW COUCHES WITH Y-Y STRUTS EXTENDED AND LOCKED. 6. COUCH SEAT PANS IN 85 DEG POSITION AND LOCKED 7. 02 UMBILICALS, CCU CONTROL HEADS AND CCU CABLES STOWED. 8. SHOULDER HARNESSES UNLOCKED AND RESTRAINT STRAPS LAID ASIDE, EXTENDED AND SNAPPED IN PLACE 9. COUCH STABILIZATION LINK - STOWED	
-09 00		09-372EP	MTPE	SCMP	PANEL 2 STATUS C/W LITES C/W PWR SW - (OFF - CTR)	*1
		09-372EQ			PANEL 5 C/W MNA CB - OPEN 005C052 C/W MNB CB - OPEN 005C053	*1
		09-372ER 09-372ES	MTPE	SCMP	EGRESS CM. NOTE PERSONNEL INGRESSING CM FOR BAT CHARGING WILL NOT DISTURB THE CABIN LAYOUT.	*1

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-09 00		09-373	MTPE	MECE UGCU UWGR	1. PROCEED WITH ECS CHILLDOWN PER SEQ 05 V2. 2. USE CH 227 FOR COORDINATION 3. REPORT COMPLETION ON CH 222.	
-06 00		09-374			COUNTDOWN CLOCK START (L/V)	
-05 30		09-375	MTPE		NOTIFY BCMP TO REPORT ON STATION AT CM.	*1
		09-376			DELETED	*1
-05 10		09-377	MTPE	MECS	VERIFY ECS CHILLDOWN COMPLETE.	*1
		09-378	MTPE	SNQC	REPORT COMPLETION OF T/S 8.2.6.2.1 (HATCH C/O INSPECT)	
						NR QC NASA QC
-05 00		09-379	MTPE	SPAD	CLEAR ALL NON-ESSENTIAL PERSONNEL...	

NOTE

FOLLOWING CSM PERSONNEL
REQUIRED ON STATION...

SA-9	LUT
SPAD	*UWGR
SCMP	*UGCU
SLMP	
SCMT	
SNQC	
SGQC	

*CONTINGENCY PERSONNEL

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-379	MSTC	HFLT	GIVE STATUS FOR LAUNCH/MISSION E-MEMORY LOAD. IDENTIFY E-MEMORY LOCATIONS THAT WILL NON-VERIFY TO MGNS ON CH 215.	
					NOTE IF CHANGES REQUIRED, PERFORM E-MEMORY LOAD PER SEQ. 11 V2.	
		09-380	MSTC	MGNS	PERFORM E-MEMORY VERIFY ON CH 215.	
		09-381	CVTS	MSTC	VERIFY ASTRONAUT STOOL LOCATED IN ELEV NO. 1.	
		09-382			DELETED	*1
		09-383			DELETED	*1
		09-384			DELETED	*1
		09-385			DELETED	*1
		09-386			DELETED	*1
		09-387			DELETED	*1
-04 30		09-388	MTPE	SPAD	CLOSE CM HATCH PER TEST SETUP 8.2.6.2.2 AND 8.2.6.2.3. REPORT COMPLETION.	NR QC NASA
		09-389			DELETED	*1

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-390	MTPE	SPAD	1. CLEAR WITH CLOSEOUT CREW TO L/V TANKING FALLBACK AREA. PREPARE TO RETURN TO PAD AT T-03 25. REPORT WHEN AT FALLBACK AREA AT MSS PARKSITE. 2. PROTECTIVE CLOTHING REQUIRED FOR CLOSEOUT CREW UPON RETURN TO PAD. (REF. SECT 1, PARA 5.6)	
-04 11		09-391			NOTE Q-BALL POWER ON	
-03 30		09-392	CVTS	MSTC	CLOSEOUT CREW AT MSS PARKSITE	
		09-393	MSTC	BOTV	1. VERIFY CAMERA 7 PATCHED TO MONITOR 67. 2. VERIFY CAMERA AA2 PATCHED TO MONITOR 68. 3. INITIATE VIDEO RECORDING OF CAMERA 25 AT T-03 10.	
-03 25		09-394	CVTS	MSTC	CONTROL AREA IS NOW OPEN FOR CLOSEOUT CREW.	
		09-395	MSTC	CVTS	SEND CLOSEOUT CREW TO SA-9	

NOTE

FOLLOWING SC PERSONNEL REQUIRED ON STATION..

SA-9	+80 FT
SPAD	*UWGR
BCMP	*UGCU
SCMT	
SGQC	

*CONTINGENCY PERSONNEL

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-396	MSTC	MLFC MECS	PROCEED WITH FOLLOWING READOUTS	

NOTE

FOLLOWING READOUTS WILL BE READ AGAIN AFTER INGRESS TO VERIFY MDC SWITCHES WERE NOT BUMPED DURING INGRESS.

09-397	MLFC	FC1 CONDENSER (P13-5) -----	DEG. F.	SC2081
		FC2 CONDENSER (P13-5) -----	DEG. F.	SC2082
		FC3 CONDENSER (P13-5) -----	DEG. F.	SC2083
		FC1 STACK TEMP (P13-6) -----	DEG. F.	SC2084
		FC2 STACK TEMP (P13-6) -----	DEG. F.	SC2085
		FC3 STACK TEMP (P13-6) -----	DEG. F.	SC2086
		FC1 H2 FLOW (P13-9) -----	LB/HR	SC2139
		FC2 H2 FLOW (P13-9) -----	LB/HR	SC2140
		FC3 H2 FLOW (P13-9) -----	LB/HR	SC2141
		FC1 O2 FLOW (P13-10) -----	LB/HR	SC2142
		FC2 O2 FLOW (P13-10) -----	LB/HR	SC2143
		FC3 O2 FLOW (P13-10) -----	LB/HR	SC2144

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-397			FC1 CURRENT OUT (P13-11) -----	AMPS	SC2113
					FC2 CURRENT OUT (P13-11) -----	AMPS	SC2114
					FC3 CURRENT OUT (P13-11) -----	AMPS	SC2115
		09-398	MECS		H2O WAST Q -----	PCNT (P8-20)	CF0009
		09-399	MSTC	ALL	GIVE CREW DEPARTURE STATUS.		
					MECS -----		
					MLFC -----		
					MEPS -----		
					MGNS -----		
					MSCS -----		
					MSPS -----		
					MRCS -----		
					MACE -----		
					MBSE -----		
					MREC -----		
					MCSE -----		
					MTPE -----		
					CSTO -----		
					HFLT -----		
		09-400	MSTC	CVTS	VERIFY GO FOR CREW DEPARTURE FROM MSOB.		
-03 15		09-401	CVTS	MSTC	GMIL SWITCHING TO CH 212 TO COORDINATE GMIL FINAL ANTENNA CALIBRATION.		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-03 10		09-402	SPAD	MSTC	CLOSEOUT CREW ON STATION.	
		09-402A	MSTC	SPAD	REMOVE ONE RESUSCITATOR FROM ML RESCUE LOCKER AND ONE EEAP FROM HOLDER AND POSITION BOTH W/R HOOD TO RIGHT OF CM HATCH.	
		09-403	MSTC	SPAD	OPEN CM HATCH PER TEST SETUP 8.2.6.2.4.	
					REPORT COMPLETION.	------ NASA QC
		09-404	SPAD	MSTC	CM HATCH IS OPEN.	
		09-405	MSTC	BCMP	INGRESS CM.	
		09-406	MSTC	SPAD	PROCEED WITH T/S 8.2.5.2.3 (CABIN PURGE SET UP)	
					REPORT COMPLETION	------ NR QC ------- NASA QC
		09-407	MSTC	BCMP	PANEL 5	
					C/W MNA CB - CLOSE	005C052
					C/W MNB CB - CLOSE	005C053
					PANEL 2	
					C/W PWR SW - 1	
					RESET MASTER ALARM	
					STATUS C/W LITES	
					PANEL 3	
					S-BAND PWR AMPL HI SW - OFF	
					S-BAND NORM XPNDR SW - OFF	
		09-408	MSTC	GMIL	SC S-BAND IS OFF.	
		09-409	MSTC	MECS	STARTING DIRECT 02 ADJUSTMENTS.	
		09-410	MSTC	BCMP	PANEL 7	
					DIRECT 02 VLV OPEN (CCW) TO OBTAIN 0.6 TO 0.8 LB/HR.	
					PANEL 4	
					SUIT COMPR 2 SW - AC 1	004S007
					(TIME)	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		09-411	MSTC	BCMP	PANEL 2	
					SUIT COMPR DP ----- PSID	0.5 TO 0.9
					SUIT CAB DP ----- IN H20	
			MECE		RECORD COMPR DP ----- PSID	
					SUIT/CABIN DP ----- IN H20	CF0003
		09-412	MSTC	BCMP	PANEL 5, 8	
					TURN ON LIGHTING AS REQD	
		09-413	MSTC	BCMP	REMOVE PYRO ARM SW LOCK AND GIVE TO SPAD.	
					NOTE SPAD RETAIN LOCK FOR REINSTALLATION.	
					WARNING PYRO SWITCHES SHALL NOT BE ARMED UNTIL AUTHORIZED BY CVTS.	
		09-414	MSTC	CVTS	NOTIFY CPSS SPAD HAS PYRO ARM SW LOCK.	
		09-415	MSTC	SPAD	VERIFY COUNTER BALANCE HANDLE IS IN PRESS POSITION.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-02 50		09-416	MSTC	BCMP	PANEL 3 S-BAND NORM XPNDR SW - PRIM S-BAND NORM PA HI SW - HI	
		09-417	MSTC	GMIL	OBTAIN TWO WAY LOCK AT -70 DBM (MODE 6.2.0)	
		09-418	MSTC	GMIL	ENABLE VHF AND S-BAND ACS CIRCUITS. DISABLE S-BAND ACS UPLINK. ENABLE VHF/S-BAND SIMUL CAPABILITY ENABLE VHF U/L CONSTANT KEY.	
		09-419	MSTC	CSTO	PUT UMB ON CH 214 PUT VHF ON CH 214 PUT S-BAND ON CH 212	
		09-420	MSTC	BCMP	INGRESS LEB TO SUPPORT CREW INGRESS.	
		09-421	MSTC	SPAD	REPORT WHEN FLIGHT CREW ARRIVES.	

NOTE

FOLLOWING SC PERSONNEL WILL BE ON PAD FOR CLOSE OUT (INCLUDING FLIGHT CREW).

SA-9	+80 FT LEVEL
SPAD	UWGR *
SCDR	UGCU *
SCMP	
	PAD APRON
SLMP	
SUIT TECH (2)	VAN DRIVER
BCMP	VAN ESCORT
SCMT	PVS1
SGQC	

* CONTINGENCY PERSONNEL

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-02 45		09-422	MSTC	ALL	GIVE CREW INGRESS STATUS.	
					MECS _____	
					MLFC _____	
					MEPS _____	
					MGNS _____	
					MSCS _____	
					MSPS _____	
					MRCS _____	
					MACE _____	
					MBSE _____	
					MREC _____	
					MCSE _____	
					SPAD _____	
					MTPE _____	
					MMED _____	
					CSTO _____	
					BCMP _____	
		09-423	MSTC	SLMP	PANEL 2	
					SEC COOL LOOP PUMP - AC 1 (TIME _____)	

NOTE

SECONDARY COOLANT LOOP PUMP MAY BE CYCLED ON AND OFF TO CONTROL CREW COMFORT. NOTIFY MECS.

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
-02 40		09-424	MSTC	SPAD	PROCEED WITH INGRESS. NARRATE INGRESS OPERATIONS ON CH212. (ON A NON-INTERFERENCE BASIS)	

NOTE

SSSA IS THE NASA SPACE SUIT TECHNICIAN INSIDE CM.

SSSB IS THE SUIT TECHNICIAN WHO WILL ESCORT CREW MEMBERS FROM TRANSFER VAN AND INGRESS CREW.

NOTE

INGRESS SLIDE MAY BE USED TO SUPPORT CREW INGRESS AS REQUIRED.

WARNING

CABIN ATMOSPHERE WILL BE 02 ENRICHED DURING INGRESS AND FOLLOWING CLOSEOUT.

NOTE

SSSA - PRIOR TO EACH CREWMAN HOOKUP TO 02 UMBILICAL, WITH INTERCONNECT REMOVED, VERIFY OPEN NOZZLES FACE COMM CABLE. THEN ROTATE UMBILICAL ASSY (NOZZLES AND COMM CABLE) TOWARD CREWMAN PRIOR TO NOZZLE HOOKUP. ENSURE NOZZLES ARE HOOKED UP BLUE TO BLUE AND RED TO RED

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-425	SSSA BCMP		INGRESS SCDR AS FOLLOWS.. 1. REMOVE BOOT PROTECTORS. 2. INGRESS INTO COUCH 3. CONNECT CCU TO PGA 4. SCDR PERFORMS FOLLOWING.. PANEL 9 SUIT PWR SW - (ON - UP) PWR SW - AUDIO/TONE 5. PANEL 301 SUIT FLOW VLV - OFF 6. REMOVE GAS CONNECTOR PLUGS FROM PGA AND RETAIN. 7. REMOVE SUIT CIRCUIT INTERCONNECT FROM COU. CONNECT COU TO PGA. RED TO RED, BLUE TO BLUE. 8. PANEL 301 SUIT FLOW VLV - FULL FLOW 9. REMOVE SUIT CKT INTERCONNECT FROM SC. SPAD RETAIN FOR REINSTALLATION, IF REQ'D. 10. POV FLOW - OFF 11. DISCONNECT POV HOSE FROM PGA AND REMOVE FROM SC. 12. INSTALL GAS CONNECTOR PLUGS INTO VACANT PGA CONNECTIONS. 13. POSITION SCDR SNUGLY INTO COUCH BY PUSHING SHOULDERS FIRMLY. 14. CONNECT RESTRAINT HARNESS, TIGHTEN RESTRAINT HARNESS SNUGLY. 15. POSITION ARM REST TO USE POSITION AND LOCK. 16. ADJUST TORSO TIE-DOWN AND REMOVE HELMET PROTECTOR. 17. VERIFY LIFE VEST PROPERLY POSITIONED.	
			MBSE		ECG CDR CJ0060 ZPN CDR CJ0200	
			MECE		SUIT/CABIN DP IN/H2O CF0003	
		09-426	SPAD	MSTC	SCDR INGRESS COMPLETE	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-427	MSTC	SCDR	PANEL 8 (VERIFY)	
					FLOAT BAG	
					1 SW - VENT	008S004
					2 SW - VENT	008S005
					3 SW - VENT	008S006
					THC - NEUTRAL AND LOCKED	
					PANEL 1 (VERIFY)	
					MAN ATT	
					ROLL SW - RATE CMD	001S007
					PITCH SW - ACCEL CMD	001S008
					YAW SW - RATE CMD	001S009
					SCS TVC	
					PITCH SW - AUTO	001S038
					YAW SW - AUTO	001S039
					ELS AUTO SW - (ON-UP)	001S063
					DV CG SW - CSM	001S054
					EVENT TIMER	
					RESET SW - CENTER	001S055
					START SW - CENTER	001S056
-02 30		09-428	SSSA BCMP		INGRESS SLMP AS FOLLOWS..	
					1. REMOVE BOOT PROTECTORS.	
					2. INGRESS INTO COUCH	
					3. CONNECT CCU TO PGA	
					4. SLMP PERFORMS FOLLOWING..	
					PANEL 6	
					SUIT PWR SW - (ON - UP)	
					PWR SW - AUDIO/TONE	
					5. PANEL 300 SUIT FLOW VLV - OFF	
					6. POV FLOW - OFF	
					7. DISCONNECT POV HOSE FROM PGA.	
					8. REMOVE SUIT CIRCUIT INTERCONNECT FROM COU. CONNECT COU TO PGA. RED TO RED, BLUE TO BLUE.	
					9. PANEL 300 SUIT FLOW VLV - SUIT FULL FLOW	
					10. REMOVE SUIT CKT INTERCONNECT FROM S/C. SPAD RETAIN FOR REINSTALLATION, IF REQ'D.	
					11. POSITION SCMP SNUGLY INTO COUCH BY PUSHING SHOULDERS FIRMLY.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-428			12. CONNECT RESTRAINT HARNESS, TIGHTEN RESTRAINT HARNESS SNUGLY.	
					13. ADJUST TORSO TIE-DOWN AND REMOVE HELMET PROTECTOR.	
					14. VERIFY LIFE VEST PROPERLY POSITIONED.	
				MBSE	ECG LMP	CJ0062
					ZPN LMP	CJ0202
				MECE	SUIT/CABIN DP IN/H20	CF0003
		09-429	SPAD	MSTC	SLMP INGRESS COMPLETE	
		09-430	MSTC	SLMP	PANEL 4 (VERIFY)	
					SPS GAUGING SW - AC1	004S003
					ECS GLY PUMPS SEL - 1 AC1	004S002
					PANEL 3 (VERIFY)	
					VHF ANT SEL - SM LEFT	003S001
					SPS QTY OXID FLOW VLV INCR SW - NORM	003S104
					MN BUS A RESET SW - (CENTER)	003S017
					SPS HE VLV	
					1 SW - AUTO	003S018
					2 SW - AUTO	003S019
					MN BUS B RESET SW - (CENTER)	003S026
					S-BAND ANT	
					OMNI A SW - B	003S041
					OMNI/D SW - OMNI	003S040
					VHF BCN SW - OFF	003S045
					PWR SCE SW - NORM	003S052
					AC BUS 1 RESET SW - (CENTER)	003S063
					AC BUS 2 RESET SW - (CENTER)	003S067

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-02 20		09-431	SSSA BCMP		INGRESS SCMP AS FOLLOWS..	
					1. REMOVE BOOT PROTECTORS.	
					2. INGRESS INTO COUCH	
					3. CONNECT CCU TO PGA	
					4. BCMP PERFORMS FOLLOWING..	
				BCMP	PANEL 10	
					SUIT PWR SW - (ON - UP)	
					PWR SW - AUDIO/TONE	
					5. PANEL 302 SUIT FLOW VLV - OFF	
					6. REMOVE GAS CONNECTOR PLUGS FROM PGA AND RETAIN.	
					7. REMOVE SUIT CIRCUIT INTERCONNECT FROM COU. CONNECT COU TO PGA. RED TO RED, BLUE TO BLUE.	
					8. PANEL 302 SUIT FLOW VLV - SUIT FULL FLOW.	
					9. REMOVE SUIT CKT INTERCONNECT FROM S/C. SPAD RETAIN FOR REINSTALLATION, IF REQ'D.	
					10. POV FLOW - OFF	
					11. DISCONNECT POV HOSE FROM PGA AND REMOVE FROM S/C.	
					12. INSTALL GAS CONNECTOR PLUGS INTO VACANT PGA CONNECTORS.	
					13. POSITION SLMP SNUGLY INTO COUCH BY PUSHING SHOULDERS FIRMLY.	
					14. CONNECT RESTRAINT HARNESS, TIGHTEN RESTRAINT HARNESS SNUGLY.	
					15. POSITION ARM REST TO USE POSITION AND LOCK.	
					16. ADJUST TORSO TIE-DOWN AND REMOVE HELMET PROTECTOR.	
					17. VERIFY LIFE VEST PROPERLY POSITIONED.	
				MBSE	ECG CMP	CJ0061
					ZPN CMP	CJ0201
				MECE	SUIT/CAB DP IN H2O	CF0003
		09-432	SPAD	MSTC	SCMP INGRESS COMPLETE	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		09-433		SSSA	VERIFY THE FOLLOWING FOR SCDR, SCMP AND SLMP A. HELMET LOCKED TO PGA B. COU CONNECTORS LOCKED TO PGA C. PGA DIVERTER VALVES POSITIONED HORIZONTALLY D. CCU LOCKED TO PGA E. RESTRAINT HARNESS SNUG AND SECURED F. PGA WRIST DISCONNECTS LOCKED G. BOOT HEELS POSITIONED IN FOOT RESTRAINTS (FIT CHECK ONLY) H. LIFE VEST PROPERLY POSITIONED. I. UNSTOW X-X FOOT LOCKOUT STRUT LANYARD, SNAP TO UPPER PORTION OF LOCKOUT BOX AND HANDLE PORTION TO MDC NEAR EVA GUARD RAIL MOUNTS.	
		09-434	MSTC	SCMP	PANEL 2 (VERIFY) ABORT SYS PRPLNT SW - DUMP AUTO 002S063 C/W NORMAL SW - BOOST 002S007 MSN TIMER SW - START 002S100 PANEL 2 (PERFORM) SUIT CIRCUIT H2O ACCUM AUTO SW - 1	
		09-435	MSTC	MMED	VERIFY MEDICAL DATA ACCEPTABLE FOR SCDR, SCMP, SLMP.	
		09-436	MSTC	HFLT	PERFORM A/G VOICE CHECK WITH SCMP ON VHF, SLMP ON S-BND AND SCDR ON VHF AND S-BND SIMUL.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-437	MSTC	SCMP	PANEL 2 READ COMPR DP PSID ----------	
				MECE	COMP IND PSID CF0015 ----------	.5 TO .9
-02 10		09-438	SPAD	SSSA	REMOVE GAS CONN PLUG AND INSERT AIRLOCK P/N 9168 INTO SCDR SPARE (INLET) BLUE FITTING AND MAINPULATE D2 ANALYZER TO OBTAIN STEADY 02 CONCENTRATION. MIN 02 ALLOWABLE 95 PERCENT. REMOVE P/N 9168. INSTALL SCDR GAS CONNECTOR PLUG. ------- NASA QC	
		09-439		SSSA	EGRESS CM.	
					NOTE IF LESS THAN 95 PCNT, SCDR OPEN DIRECT 02 FOR PURGE AS REQUIRED UNTIL 95 PCNT IS OBTAINED.	
		09-440		MECE	RECORD.. 02 FLOW RATE LB/HR CF0035 ----- SUIT TEMP DEG. F. CF0008 45-70 ----- CO2 PART PRESS MM HG CF0005 7.6 MAX -----	
-02 00		09-441	MSTC	CVTS	1. VERIFY LOM READY FOR AAS CHECKS AT T-01 55 ON CH 214. 2. EDS POWER COMING ON AT T-01 55. 3. CSM DECODER COMING ON. 4. REQUEST GMIL SUPPORT ON CH 214. 5. REQUEST HFLT STANDBY FOR CMD CKS.	
		09-442	MSTC	GMIL	1. VERIFY TWO-WAY LOCK OF S-BAND (MODE 6.2.0). 2. COMMAND DECODER IS COMING ON.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-443	MSTC	SLMP	PANEL 3	
					UP TLM CMD SW - NORM	003S039
		09-444	MSTC	HFLT	EXECUTE ACE G+N UPLINK DISABLE (RTC 10 AND 14)	
		09-445	MSTC	MGNR	VERIFY NO VERB/NOUN FLASH ACTIVITY. K148 INSERT V34	
			MGNR		NO V34 DISPLAY	
		09-446	MSTC	HFLT	DSKY INSERT	
					V34	
			MGNR		V34	
		09-447	MSTC	HFLT	EXECUTE E EXECUTE ERROR RESET	
		09-448	MSTC	HFLT	EXECUTE PCM DATA RATE HIGH (RTC 64,71)	
		09-449	MSTC	MCSE	VERIFY VALIDITY SIGNALS (2)	CT0262
		09-450	MSTC	MREC	VERIFY NO CHANGE IN PCM RATE	
		09-451	MSTC	SCMP	PANEL 2	
					UP TLM CM SW - BLOCK	002S021
		09-452	MSTC	BCMP	PANEL 10	
					PAD COMM SW - OFF EGRESS CM.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
-01 55		09-453	MSTC	SCDR	PANEL 8 EDS 1 CB - CLOSE 2 CB - CLOSE 3 CB - CLOSE	 008C049 008C050 008C051	
					PANEL 7 EDS PWR SW - (ON-UP)	 007S001	
		09-454	MSTC	SCMP	PANEL 2		
					EDS AUTO SW - (ON-UP)	002S067	
			MSEQ		EDS VOTE 1 OUT LITE ON EDS VOTE 2 OUT LITE ON EDS VOTE 3 OUT LITE ON	CD0132 CD0133 CD0134	
		09-455	MSTC	CVTS	EDS POWER IS ON		
		09-456	MSTC	SCDR	STANDBY FOR ABORT REQUEST LIGHT CMD CHECKS.		
		09-457	MSTC	LOM	ABORT REQ A SW - ON		
			SCDR		ABORT LITE ON		
				MSEQ	ABT RQST A LITE ON ABT RQST B LITE ON	BS0080	
		09-458	MSTC	LOM	ABORT REQUEST A SW - OFF		
			SCDR		ABORT LITE REMAINS ON		
				MSEQ	ABT RQST B LITE OFF		
		09-459	MSTC	HFLT	EXECUTE ABORT LIGHT (SYSTEM A) - OFF (RTC 00)		
			SCDR		ABORT LITE OUT		
				MSEQ	ABT RQST A LITE OFF	BS0080	
		09-460	MSTC	LOM	ABORT REQ B SW - ON		
			SCDR		ABORT LITE ON		
				MSEQ	ABT RQST B LITE ON ABT RQST A LITE ON	BS0081	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		09-461	MSTC	LOM	ABORT REQ B SW - OFF	
			SCDR		ABORT LITE REMAINS ON.	
				MSEQ	ABT RQST A LITE OFF	
		09-462	MSTC	GMIL	RESET REQUEST B RECEIVED LITE	
		09-463	MSTC	HFLT	EXECUTE ABORT LIGHT (SYSTEM B) - OFF RTC (06)	
			SCDR		ABORT LITE OUT	
				MSEQ	ABT RQST B LITE OFF	BS0081
		09-464	MSTC	HFLT	EXECUTE ABORT LIGHT (SYSTEM A) - ON (RTC 01)	
			SCDR		PANEL 1	
					ABORT LITE ON	
			MSEQ		ABORT REQUEST A LITE ON	BS0080
		09-465	MSTC	HFLT	EXECUTE ABORT LIGHT (SYSTEM A) - OFF (RTC 00)	
			SCDR		ABORT LITE OUT	
				MSEQ	ABT RQST A LITE OFF	
		09-466	MSTC	HFLT	EXECUTE ABORT LIGHT (SYSTEM B) - ON (RTC 07)	
			SCDR		PANEL 1	
					ABORT LITE ON	
			MSEQ		ABORT REQUEST B LITE ON	BS0081
		09-467	MSTC	HFLT	ABORT LIGHT (SYSTEM B) - OFF (RTC 06)	
			SCDR		ABORT LITE OUT	
			MSEQ		ABORT REQUEST B LITE OFF	BS0081
		09-468	MSTC	LOM	AAS CHECKS COMPLETE	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-469	MSTC	SLMP	PANEL 3 UP TLM CMD SW - OFF	003S039
-01 52		09-470	MSTC	CVTS	AAS CHECKS COMPLETE. CMD DECODER IS OFF	
		09-471	MSTC	MSEQ MACE MGNR MNQC	GO TO CH223 FOR EDS TEST (K-0042). REPORT COMPLETION.	
		09-472	MSTC	SCDR	PANEL 9 S-BAND SW - OFF INTERCOM SW - OFF VHF AM SW - OFF	 009S002 009S005
		09-473	MSTC	SLMP	PANEL 6 PAD COMM SW - OFF	
		09-474	MSTC	CSTO	PUT CH 223 ON UMBILICAL	
					NOTE SCDR ON CH 223 VIA UMBILICAL.	
-01 51		09-475	MSTC	CVTS	CSM PERSONNEL ON 223 FOR EDS TEST.	
					NOTE FOLLOWING TIME FOR REFERENCE ONLY. CLOSE HATCH AS SOON AS POSSIBLE.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-01 40		09-476	MSTC	SPAD	CLOSE CM HATCH.	

NOTE

CM HATCH CLOSING PROCEEDS AS FOLLOWS.

09-477 SPAD

1. VERIFY/REMOVE 9EH2191 SEAL PROTECTOR. ------- NASA QC

2. VERIFY HATCH SEAL IS FREE OF FOREIGN PARTICLES ------- NASA QC

3. REMOVE V36-553292 SAFETY PIN ------- NASA QC

4. SET GEAR BOX RACHET SELECTOR AND PUMP HANDLE RACHET SELECTOR TO NEUTRAL POSITION ------- NASA QC

5. VERIFY BPC HATCH RELEASE SELECTOR ARROW POINTS AWAY FROM BPC JETT. APPLY POSITIVE PRESSURE TO BPC PLUNGER CENTER SHAFT ASSY AND VERIFY PLUNGER IN LOCKED CONDITION ------- NASA QC

6. VERIFY THAT LATCHES ARE IN FULL OPEN POSITION ------- NASA QC

7. RELEASE HATCH STOP LEVER OF COUNTER BALANCE ARM ASSY. ------- NASA QC

8. PUSH HATCH TO CLOSE POSITION. ------- NASA QC

9. WITH TOOL B (V36-601400) INSTALLED INTO HATCH LATCHING MECHANISM TURN TOOL CLOCKWISE TO STOPS AND HOLD. ------- NASA QC

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		09-478	SPAD	SLMP	PRESS/HOLD GEAR BOX SHEAR PIN RESET BUTTON.	
		09-479		SPAD	RELAX TORQUE AND ROTATE B TOOL CCW APPROX 14 DEG TO OBTAIN SHEAR PIN ENGAGEMENT.	
					NOTE TOOL MAY TEND TO ROTATE CCW SLIGHTLY DUE TO SPRING PRESSURE.	
		09-480	SPAD	SLMP	1. RELEASE SHEAR PIN RESET BUTTON.	
					2. VERIFY SHEAR PIN INDICATOR IN THE WHITE AND SHEAR PIN NOT SHEARED.	
					NOTE A. IF SHEAR PIN REVERIFICATION IS NECESSARY, ON MSTC/MTPE DIRECTION, REPERFORM PREVIOUS FOUR STEPS. B. IF SHEAR PIN IS INADVERTENTLY SHEARED, OPEN HATCH AND REPLACE SHEAR PIN PER TCP K-10004, SEQ 18.0, PER MSTC/MTPE DIRECTION.	
					3. SET GEAR BOX RACHET SELECTOR AND PUMP HANDLE RACHET SELECTOR TO UNLATCH POSITION.	
					4. VERIFY GAGE PRESS OF COUNTER BALANCE IS INDICATING IN THE GREEN.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-01 35		09-481	SPAD	MSTC	CM HATCH CLOSED.	
		09-482	MSTC	SPAD	VERIFY PURGE LINE HOOK-UP COMPLETE PER T/S 8.2.5.2.3	------- NASA QC
		09-483	MSTC	MECS	PERFORM CABIN PURGE AND LEAK CHECK PER SEQ. 05 V2 ON CH227. REPORT COMPLETION.	
		09-484	MSTC	HFLT	REQUEST NEW AZIMUTH OR VERIFY OLD AZIMUTH IS CORRECT	
					NOTE IF NEW AZIMUTH DESIRED PERFORM THE FOLLOWING	
		09-485	HFLT		NEW AZIMUTH + -----	NO NEED FOR
		09-486	MSTC	SCMP	PANEL 2 INSERT V78E V21E + (NEW AZIMUTH) ----- ENTER PRO	
					NOTE INDICATED PERSONNEL WILL PERFORM FOLLOWING READOUT TO VERIFY SWITCHES WERE NOT BUMPED DURING INGRESS. REPORT ANY ANOMALIES TO MSTC.	
		09-487	MSEQ		VERIFY.. LOGIC BUS SAFE LITE ON CD0088 PYRO BUS SAFE LITE ON CD0218 C AND W MASTER ALARM LITE OFF CS0150	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		09-487	MSCL		VERIFY..	
					ALL S/D LITES ON (16)	
					SCS CONT MODE LITE ON	CH3607
					ATT DB MIN LITE ON	CH3588
					RATE SW HIGH LITE ON	CH3590
					FDAI ERR 5 RTE 5 LITE OFF	CH3592
					FDAI 50/15 50/10 LITE OFF	CH3593
					GYRO 1 SMRD LITE ON	CH3623
					GYRO 2 SMRD LITE ON	CH3624
					ROLL BMAG RATE 2 LITE ON	CH3636
					PITCH BMAG RATE 2 LITE ON	CH3639
					YAW BMAG RATE 2 LITE ON	CH3642
					LIMIT CYCLE ON LITE OFF	CH3606
					PITCH ACCEL CMD LITE ON	CH3612
		09-486	MGNL		VERIFY..	
					IMU CAGE LITE OFF	ZG8062
					S/C CONTROL OF SATURN LITE OFF	ZG8015
					FREE MODE LITE ON	ZG9032
					BLOCK UPLINK LITE ON	ZG8041
		09-489	MRCS		VERIFY..	
					SM A OMP LESS THAN 100 (P14-9)	SR5733
					SM A FMP LESS THAN 100 (P14-9)	SR5737
					SM B OMP LESS THAN 100 (P14-10)	SR5780
					SMB FMP LESS THAN 100 (P14-10)	SR5784
					SM C OMP LESS THAN 100 (P14-11)	SR5820
					SM C FMP LESS THAN 100 (P14-11)	SR5822
					SM D OMP LESS THAN 100 (P14-12)	SR5821
					SM D FMP LESS THAN 100 (P14-12)	SR5823
					SMMA EPT AMBIENT (P14-17)	SR5065
					SM B EPT AMBIENT (P14-18)	SR5066
					SM C EPT AMBIENT (P14-19)	SR5067
					SM D EPT AMBIENT (P14-20)	SR5068
		09-490	MEPS		VERIFY..	
					ENTRY BAT A CURRENT 3 AMPS MAX (P1-12)	CC0222
					ENTRY BAT B CURRENT 3 AMPS MAX (P1-12)	CC0223
					ENTRY BAT C CURRENT 3 AMPS MAX (P1-12)	CC0224
					BAT CHARGER AMP LOWER LIMITS (P1-24)	CC0215

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-491	MREC		VERIFY.. DSE MOTION LITE OFF		CT0012
		09-492	MLFC		FC1 CONDENSER (P13-5) -----	DEG. F.	SC2081
					FC2 CONDENSER (P13-5) -----	DEG. F.	SC2082
					FC3 CONDENSER (P13-5) -----	DEG. F.	SC2083
					FC1 STACK TEMP (P13-6) -----	DEG. F.	SC2084
					FC2 STACK TEMP (P13-6) -----	DEG. F.	SC2085
					FC3 STACK TEMP (P13-6) -----	DEG. F.	SC2086
					FC1 H2 FLOW (P13-9) -----	LB/HR	SC2139
					FC2 H2 FLOW (P13-9) -----	LB/HR	SC2140
					FC3 H2 FLOW (P13-9) -----	LB/HR	SC2141
					FC1 O2 FLOW (P13-10) -----	LB/HR	SC2142
					FC2 O2 FLOW (P13-10) -----	LB/HR	SC2143
					FC3 O2 FLOW (P13-10) -----	LB/HR	SC2144

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N			REMARKS
		09-492			FC1 CURRENT OUT (P13-11) -----	AMPS	SC2113	
					FC2 CURRENT OUT (P13-11) -----	AMPS	SC2114	
					FC3 CURRENT OUT (P13-11) -----	AMPS	SC2115	
		09-493	MECS		H2O WASTE Q -----	PCNT (P8-20)	CF0009	
					NO DECREASE IN H2O WASTE Q (P8-20) FROM VALUE RECORDED AT START OF CREW INGRESS.		CF0009	
		09-494	MECS	MSTC	ECS CABIN FUNTIONS COMPLETE.			------- NASA QC
		09-495	MSTC	SCMP	PANEL 2			
					CABIN FAN 1 SW - OFF			
					CABIN FAN 2 SW - OFF			
		09-496	SPAD	SLMP	SET BPC HATCH RELEASE SELECTOR ARROW TO ''BPC JETT''.			
		09-497	MSTC	SPAD	1. CLOSE BPC HATCH PER T/S 8.2.6.2.5			
					2. REPORT WHEN COMPLETE.			------- NASA QC
-01 21	212	09-498	MSEQ	MSTC	EDS TEST COMPLETE.			
	214	09-499	MSTC	CSTO	PUT CH 214 ON UMBILICAL.			
		09-500	MSTC	SCDR	PANEL 9			
					INTERCOM Sw - T/R		009S005	
					VHF AM SW - T/R		009S004	
					S-BAND SW - T/R			
		09-501	MSTC	SLMP	PANEL 6			
					PAD COMM SW - T/R			

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		09-502	MSTC	SCDR	PANEL 7	
					EDS POWER SW - OFF	007S001
			MSEQ		EDS VOTE 1 OUT LITE OFF	CD0132
					EDS VOTE 2 OUT LITE OFF	CD0133
					EDS VOTE 3 OUT LITE OFF	CD0134
		09-503	MSTC	SLMP	PANEL 3	
					BAT C _____ VDC	
		09-504	MSTC	SCMP	PANEL 2	
					UP TLM IU SW - ACCEPT	
		09-505	MSTC	CVTS	1. EDS POWER IS OFF 2. CSM READY FOR Q-BALL SIM CMD. READING WILL BE SUPPLIED ON CH 148. 3. CCS IS ENABLED	
		09-506	MSTC	MTPE SCDR MREC	STANDBY FOR Q-BALL SIM CMD AT T-01 13.	
					NOTE MTPE WILL MONITOR CH121 AND GIVE MARK TO SCDR AND MREC ON CH212 FOR Q-BALL CAL.	
		09-507		SCDR	PANEL 1	
					LV ALPHA/SPS PC IND _____ PCNT	
				MREC	ANGLE OF ATTACK _____ PCNT (P11-8)	LS0200
					NOTE MTPE GIVE READING TO VUMS ON CH 148.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-508	MSTC	SPAD	1. VERIFY BPC HATCH INSTALLATION COMPLETE.	------- NASA QC
					2. PROCEED WITH W/R SECURING.	
					3. REPORT WHEN COMPLETE.	------- NASA QC
					4. PAD CLEARING STARTS AT T-55 00.	
					5. PERFORM THE FOLLOWING..	
					A. EXTEND E/C HOOD JACKSCREWS (2 EA.) TO POINT OF CONTACT PLUS 5 TURNS.	------- NASA QC
					B. REMOVE HOOD SUPPORT KNOB AND STOW	------- NASA QC
					C. UNLATCH REMOVABLE HOOD SECTIONS, REMOVE AND STOW.	------- NASA QC
					D. EXTEND LEFT SIDE HINGED HOOD SECTION AND LOCK IN EXTENDED POSITION.	------- NASA QC
					E. OPEN AND LATCH E/C AND TRUSS DOORS.	------- NASA QC
-01 13		09-509	CLTC	MSTC	READY FOR CCS BLOCK	
		09-510	MSTC	SCMP	PANEL 2 UP TLM IU SW - BLOCK	
-01 00		09-511	MSTC	MSCS	STANDBY FOR BMAG 1 AND BMAG 2 POWER APPLICATION	
		09-512	MSTC	SCMP	PANEL 2 C/W NORMAL SW - NORMAL VERIFY BMAG 1 AND BMAG 2 TEMP LITES OFF	

NOTE

MASTER ALARM MAY LITE DURING SWITCHING OF BMAG PWR SEL SW. IF SO RESET.

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		09-513	MSTC	SCDR	PANEL 7	
					FDAI/GPI PWR SEL - OFF	007S003
					SCS ELEC PWR SEL - GDC/ECA	007S005
					BMAG 1 PWR SEL - ON	007S006
					BMAG 2 PWR SEL - ON	007S007
				MSCL	RECORD TIME IN TABLE 1.	
					GYRO 1 SMRD LITE OFF	CH3623
					GYRO 2 SMRD LITE OFF	CH3624
					NOTE	
					WAIT 30 SEC.	
		09-514	MSTC	SCDR	PANEL 7	
					FDAI/GPI PWR SEL - BOTH	007S003
		09-515	MSTC	SCMP	PANEL 2	
					C/W NORMAL SW - ACK	002S007
		09-516	MSTC	MSCR	RECORD SCS NULLS	
					ROLL AT ERR DEG (P17-2) -----	CH3502
					PITCH AT ER DEG (P17-2) -----	CH3500
					YAW AT ERR DEG (P17-2) -----	CH3501
					ROLL RATE DG/S (P17-3) -----	CH3505
					PITCH RATE DG/S (P17-3) -----	CH3503
					YAW RATE DG/S (P17-3) -----	CH3504
					GDC ALIGN ---------	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-517	MSTC	SCDR	PANEL 1	
					FDAI SELECT SW - 1 001S004 SOURCE SW - ATT SET 001S005 ATT SET ROLL TW - 162 DEG PITCH TW - 90 DEG YAW TW - 0 DEG GDC ALIGN PB - PUSH UNTIL FDAI 1 HAS STABILIZED	
					FDAI 1 ERRORS NULL ATT SET ROLL TW - 168 DEG PITCH TW - 81 DEG YAW TW - 355 DEG	
				MSCR	ROLL AT ER DEG (P17-2) -----	CH3502 -4 MIN
					PITCH AT ER DEG (P17-2) -----	CH3500 -4 MIN
					YAW AT ER DEG (P17-2) -----	CH3501 -4 MIN
				SCDR	FDAI 1 ERRORS R = FULL SCALE RIGHT P = FULL SCALE UP Y = FULL SCALE RIGHT	
					FDAI SELECT SW - 2 001S004	
					VERIFY FDAI 2 ATTITUDE ERRORS SAME AS WERE ON FDAI 1.	
				MSCR	ROLL AT ER DEG (P17-2) -----	CH3502 -4 MIN
					PITCH AT ER DEG (P17-2) -----	CH3500 -4 MIN
					YAW AT ER DEG (P17-2) -----	CH3501 -4 MIN

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-518	MSTC	SCDR	PANEL 1	
					GDC ALIGN PB - PUSH UNTIL FDAI 2 HAS STABILIZED	001S037
				SCMP	FDAI 2 ERRORS NULL	
		09-519	MSTC	SCDR	PANEL 1	
					ATT SET ROLL TW - 162 DEG PITCH TW - 90 DEG YAW TW - 0 DEG	
				SCMP	FDAI 2 - ERRORS	
					R = FULL SCALE LEFT P = FULL SCALE DOWN Y = FULL SCALE LEFT	
				MSCL	ROLL AT ER _____ DEG (P17-2) -----	CH3502 +4 MIN
					PITCH AT ER _____ DEG (P17-2) -----	CH3500 +4 MIN
					YAW AT ER _____ DEG (P17-2) -----	CH3501 +4 MIN
		09-520	MSTC	SCDR	PANEL 1	
					FDAI SELECT SW - 1	001S004
					VERIFY FDAI 1 ATT ERRORS SAME AS WERE ON FDAI 2.	
				MSCR	ROLL AT ER _____ DEG (P17-2) -----	CH3502 +4 MIN
					PITCH AT ER _____ DEG (P17-2) -----	CH3500 +4 MIN
					YAW AT ER _____ DEG (P17-2) -----	CH3501 +4 MIN

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-521	SCDR		GDC ALIGN PB - PUSH UNTIL FDAI 1 HAS STABILIZED	001S037
					FDAI 1 - TOTAL ATTITUDE	
					R = 162 DEG	
					P = 90 DEG	
					Y = 0 DEG	
					GIMBAL DRIVE AND TRIM CHECK	

		09-522	MSTC	SCDR	PANEL 8	
					SPS PITCH 1 BAT A - CLOSED	
					SPS YAW 1 BAT A - CLOSED	
		09-523	MSTC	SLMP	PANEL 5	
					MN BUS TIE	
					BAT A/C SW - (ON-UP)	005S004
					BAT B/C SW - (ON-UP)	005S005
			MEPS		ENTRY BATTS ON MN BUSES	
		09-524	MSTC	SCDR	PANEL 1	
					SCS TVC	
					PITCH SW - RATE CMD	001S038
					YAW SW - RATE CMD	001S039
		09-525	MSTC	SCDR	PANEL 7	
					TVC SERVO PWR	
					1 SW - AC1/MNA	007S008
					2 SW - AC2/MNB	007S009
					PANEL 1	
					LV/SPS IND SII/SIVB SW - GPI	001S053
					ROT CONTR PWR NORM 2 SW - AC	001S065
		09-526	MSTC	SCDR	RHC 2 - ARMED	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-527	MSTC	SCDR	PANEL 1	
					SPS GMBL MOT	
					PITCH 1 SW - START, REL 001S040	
					YAW 1 SW - START, REL 001S042	
					(MSCL RECORD TIME IN TABLE 1)	
					SPS GMBL PITCH TW - PLUS	
					VERIFY GPI (+) PITCH	
					SPS GMBL PITCH TW - MINUS	
					VERIFY GPI (-) PITCH	
					SPS GMBL YAW TW - PLUS	
					VERIFY GPI (+) YAW	
					SPS GMBL YAW TW - MINUS	
					VERIFY GPI (-) YAW	
					SPS GMBL PITCH TW - 0	
					SPS GMBL YAW TW - 0	
					RHC 2	
					PERFORM MTVC CONTROL CHECK.	
					VERIFY GIMBAL RESPONSE ON GPI.	
		09-526	MSTC	SCDR	PANEL 1	
					SCS TVC	
					PITCH SW - AUTO 001S038	
					YAW SW - AUTO 001S039	
					SPS GMBL MOT	
					PITCH 2 SW - START, REL 001S041	
					YAW 2 SW - START, REL 001S043	
					(MSCL RECORD TIME IN TABLE 1.)	
					THC - CW	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		09-528			PANEL 1 SPS GMBL PITCH TW - PLUS VERIFY GPI (+) PITCH SPS GMBL PITCH TW - MINUS VERIFY GPI (-) PITCH SPS GMBL YAW TW - PLUS VERIFY GPI (+) YAW SPS GMBL YAW TW - MINUS VERIFY GPI (-) YAW SPS GMBL PITCH TW - 0 SPS GMBL YAW TW - 0 RHC 2 PERFORM MTVC CONTROL CHECK. VERIFY GIMBALS RESPOND ON GPI AND RETURN TO SET-IN VALUES WHEN RHC IS NEUTRAL. PANEL 1 SPS GMBL MOT PITCH 2 SW - OFF 0015041 YAW 2 SW - OFF 0015043 (MSCL RECORD TIME IN TABLE 1).	
		09-529 MSTC	HFLT		REQUEST TW SETTINGS FOR SPS GIMBAL POSITIONS. NOTE RECORD IN FOLLOWING SEQ.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-530	MSTC	SCDR	RHC 2 PERFORM MTVC CONTROL CHECK. VERIFY NO GIMBAL RESPONSE ON GPI. THC - NEUTRAL PANEL 1 SPS GMBL PITCH TW - -1.55 YAW TW - 1.32		TBD TBD
					SPS GMBL MOT PITCH 1 SW - OFF YAW 1 SW - OFF	001S040 001S042	
				MSCL	RECORD TIME IN TABLE 1.		
		09-531	MSTC	SCDR	PANEL 1 ROT CONTR PWR NORM 2 SW - AC/DC	001S065	
					RHC 2 - LOCKED		
		09-532	MSTC	SLMP	PANEL 5 MN BUS TIE BAT A/C SW - OFF THEN AUTO BAT B/C SW - OFF THEN AUTO	005S004 005S005	
			MEPS		ENTRY BATTS OFF MN BUSES		
		09-533	MSTC	SCDR	PANEL 7 TVC SERVO PWR 1 SW - OFF 2 SW - OFF	007S008 007S009	
					PANEL 1 LV SPS IND S-II/S-IVB SW - S-II/S-IVB		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-534	MSTC	SCDR	PANEL 1		
					FDAI		
					SELECT SW - 1/2	001S004	
					SOURCE SW - CMC	001S005	
					FDAI 1 TOTAL ATTITUDE		
					R = LAUNCH AZ +90 DEG.		*1
					P = 90 DEG 89		
					Y = 0 DEG		
					EMS RSI SETUP		

		09-535	MSTC	SCDR	PANEL 1		
					ENTRY EMS ROLL SW - (ON-UP)	001S050	
					GDC ALIGN PB - PUSH, HOLD	001S037	
					ATT SET YAW TW - ADJUST		
					THROUGH 45 DEG ANGLE, OBSERVE		
					RSI TRACKS APPROX 45 DEG.		
					ADJUST UNTIL EMS RSI POINTS UP		
					GDC ALIGN PB - REL	001S037	
					ENTRY EMS ROLL SW - OFF	001S050	
					ALIGN GDC TO IMU		

		09-536	MSTC	SCDR	PANEL 1		
					FDAI		
					SELECT SW - 1	001S004	
					SOURCE SW - ATT SET	001S005	
					ATT SET SW - IMU	001S006	
					ATT SET TW (3) - NULL FDAI 1		
					ERRORS		
		09-537	MSTC	SCDR	PANEL 1		
					ATT SET SW - GDC	001S006	
					GDC ALIGN PB - PUSH, HOLD	001S037	
					UNTIL GDC ALIGNED.		
					FDAI		
					SOURCE SW - CMC	001S005	
					SELECT SW - 1/2	001S004	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-537			EMS DV SET ----------	
		09-538	MSTC	SCDR	PANEL 1 EMS MODE SW - STBY EMS FUNCTION SEL - DV SET/VHF RNG SET EMS RANGE/DV IND - 6999.9 FPS EMS FUNCTION SEL - DV	
					NOTE FOLLOWING TIMES IN MINUTES AND SECONDS.	
		09-539	MSTC	SPAD	1. RETURN 1 EEAP TO HOLDER IN W/R AND 1 RESUSCITATOR TO ML RESCUE LOCKER. NASA QC 2. VERIFY W/R SECURING COMPLETE. NASA QC 3. PERFORM FINAL INSPECTION. REPORT COMPLETION. NASA QC	
-55 00		09-540	MSTC	SPAD	CLEAR THE SWING ARM.	*1
		09-541	MSTC	SCMP	PANEL 2 C/W NORMAL SW - BOOST	002S007
		09-542	MSTC	CVTS	1. E/C HOOD READY FOR SA-9 RETRACT. 2. CSM PERSONNEL ARE CLEARING THE CONTROL AREA (SIMULATE). 3. STANDING BY TO CYCLE SA-9 AND ARM S/C BUSES.	
-45 00		09-543	MSTC	CVTS	REQUEST GMIL SUPPORT ON CH213	
		09-544	MSTC	SLMP	DEPRESS CONTROL HEAD XMIT SW UNTIL ADVISED TO RELEASE.	
		09-545	MSTC	GMIL	RELEASE VHF ACS WHILE SLMP IS KEYING FOR RF TERMINAL COUNT.	
		09-546	MSTC	MCSE MOLC MCRF GMIL	PROCEED WITH RF READOUTS PER SEQ. 04, V2. USE CH 213 FOR COORDINATION.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-44 00		09-547	MSTC	CVTS	1. EDS POWER IS COMING ON.	
					2. CSM CMD DECODER IS COMING ON	
		09-548	MSTC	SLMP	PANEL 3 UPTLM CMD SW - NORM	003S039
		09-549	MSTC	SCDR	PANEL 7	
					EDS PWR SW - (ON-UP)	007S001
			MSEQ		EDS VOTE 1 OUT LITE ON EDS VOTE 2 OUT LITE ON EDS VOTE 3 OUT LITE ON	CD0132 CD0133 CD0134
-43 30		09-550	CVTS	MSTC	STAND BY FOR SA-9 RETRACT.	
-43 00		09-551			SA-9 RETRACTED (L/V)	
					NOTE WAIT FOR SA-9 RETRACT. (FOR CDDT, SA-9 WILL BE RECONNECTED)	
		09-552	MSTC	SLMP	HATCH GEAR BOX RATCHET SEL - LATCH	
		09-553	MSTC	MACE	VERIFY RF PCM OPERATION SATISFACTORY. LOAD PLUGS OUT PROGRAM. EXECUTE R112 - 1010. ENABLE BOTH DECOMS TO CONTROL ROOM.	
					NOTE MOMENTARY BLINKING OF APPLICABLE AIRBORNE PARAMETERS MAY BE SEEN ON CONTROL ROOM DIRECT DRIVEN DISPLAYS.	
		09-554	CVTS	MSTC	SA-9 AT PARK POSITION. CLEAR TO ARM CSM BUSSES.	
		09-555	MSTC	SCDR	PANEL 1	
					CM RCS LOGIC SW - (ON-UP)	001S046
					NOTE VERIFY RCS CONTROL SAFE LITE ON 50 SECONDS AFTER ARMING RCS LOGIC AND PRIOR TO ARMING PYRO BUSSES.	*1

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		09-556	MSTC	SCDR	PANEL 8		
					SECS		
					ARM A CB - CLOSE	008C001	
					ARM B CB - CLOSE	008C002	
					LOGIC A CB - CLOSE	008C003	
					LOGIC B CB - CLOSE	008C004	
					LOGIC 1 SW - (ON-UP)	008S011	
					LOGIC 2 SW - (ON-UP)	008S015	
			MSEQ		LOGIC BUS SAFE LITE OFF	CD0088	
					LOGIC BUS ARMED LITE ON	CD0089	
					RCS ENABLE A AND B LITES OFF	CD0170	
						CD0171	
					ELS A AND B SAFE LITES (8) ON	CE0310	
						THRU	
						CE0317	
					MESC SYS A AND B SAFE LITES ON	CD0084	
						CD0085	
					RCS CONTROL SAFE LITE ON	CD0270	
					SMJC SAFE A AND B LITES ON	SD0352	
						SD0353	
					LOGIC BUS A 31.2 VDC (P1-21)	CD0200	27.0 TO 38.0VDC
					LOGIC BUS B 31.6 VDC (P1-21)	CD0201	27.0 TO 38.0VDC
		09-557	MSTC	SCDR	PANEL 8		
					SECS		
					PYRO ARM A SW - (ON-UP)	008S010	
					PYRO ARM B SW - (ON-UP)	008S014	
			MSEQ		PYRO BUS ARMED LITE ON	CD0219	
					PYRO BUS SAFE LITE OFF	CD0218	
					PYRO BUS B 37.0 VDC (P1-22)	CD0006	33.0 TO 39.0VDC
					PYRO BUS A 37.2 VDC (P1-22)	CD0005	33.0 TO 39.0VDC
		09-558	MSTC	CVTS	CSM BUSSES ARE ARMED		
					NOTE		
					AFTER SA-9 RECONNECT...		
		09-559	MSTC	SLMP	HATCH GEAR BOX RATCH SEL - UNLATCH		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-25 00		09-560	MSTC	MRCS	VERIFY READY FOR PRESSURIZATION	

NOTE

FOLLOWING IS A SIMULATION ONLY. VALVES WILL NOT BE CYCLED OPEN.

09-561 MSTC SCMP PANEL 2

SM RCS

HE 1

A SW - (ON-UP), REL	002S024
A TB - B/P	
B SW - (ON-UP), REL	002S025
B TB - B/P	
C SW - (ON-UP), REL	002S026
C TB - B/P	
D SW - (ON-UP), REL	002S027
D TB - B/P	

HE 2

A SW - (ON-UP), REL	002S034
A TB - B/P	
B SW - (ON-UP), REL	002S035
B TB - B/P	
C SW - (ON-UP), REL	002S036
C TB - B/P	
D SW - (ON-UP), REL	002S037
D TB - B/P	

SEC PRPLNT FUEL PRESS

A SW - 'CLOSE', REL	002S116
B SW - 'CLOSE', REL	002S117
C SW - 'CLOSE', REL	002S118
D SW - 'CLOSE', REL	002S119

09-562 MSTC MRCS VERIFY GO FOR PROPELLANT ARMING

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-563	MSTC	SCMP	PANEL 2	
					SM RCS	
					PRPLNT	
					A SW - (ON-UP), REL	002S047
					B SW - (ON-UP), REL	002S048
					C SW - (ON-UP), REL	002S049
					D SW - (ON-UP), REL	002S050
					PRIM PRPLNT	
					A TB - B/P	
					B TB - B/P	
					C TB - B/P	
					D TB - B/P	
					SEC PRPLNT	
					A TB - BP	
					B TB - BP	
					C TB - BP	
					D TB - BP	
					NOTE	
					FOLLOWING SM A, B, C, D READINGS FOR ENGINEERING INFO ONLY.	
		09-564	MSTC	SCMP	PANEL 2	
					RCS IND SEL - SM A	002S028
					SM RCS	
					TEMP PKG IND _____ DEG. F.	
					PRESS HE IND _____ PSIA	
					SEC FUEL	
					PRESS IND _____ PSIA	
					PRPLNT QTY IND _____ PCNT	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-564			SM RCS IND SW - HE TK TEMP	
					HE TK TEMP _____ DEG. F.	
					RCS IND SEL - SM B	002S028
					SM RCS	
					TEMP PKG IND _____ DEG. F.	
					PRESS HE IND _____ PSIA	
					SEC FUEL	
					PRESS IND _____ PSIA	
					HE TK TEMP IND _____ DEG. F.	
					SM RCS IND SW - PRPLNT QTY	
					SM RCS PRPLNT QTY IND _____ PCNT	
					RCS IND SEL - SM C	002S028
					SM RCS	
					TEMP PKG IND 75 DEG. F.	
					PRESS HE IND 180 PSIA	
					SEC FUEL	
					PRESS IND _____ PSIA	
					PRPLNT QTY IND _____ PCNT	
					SM RCS IND SW - HE TK TEMP	
					SM RCS HE TK TEMP IND _____ DEG. F.	
					RCS IND SEL - SM D	002S028
					SM RCS	
					TEMP PKG IND 75 DEG. F.	
					PRESS HE IND 180 PSIA	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-564			SEC FUEL PRESS IND 29 PSIA HE TK TEMP IND 67 DEG. F. SM RCS IND SW - PRPLNT QTY SM RCS PRPLNT QTY IND 0 PCNT	
		09-565	MSTC		PROVIDE SCDR WITH ALTIMETER ALIDADE SETTING. BARO _____ ALT 383.0	
		09-566	MSTC	MQLD	VERIFY SYNC OF S-BAND PM DATA. START MAG TAPE RCDR, ANALOG RCDR, EVENT RCDR.	
-20 00		09-567	MSTC	HFTC	VERIFY OLD AZIMUTH OR REQUEST NEW AZIMUTH. NOTE IF AZIMUTH UPDATE REQUIRED, PERFORM THE FOLLOWING..	
		09-568	HFLT		NEW AZIMUTH+ _____	
		09-569	MSTC	SCMP	PERFORM AZIMUTH CHANGE TO + _____ *NEW AZIMUTH)	
		09-570	MSTC	SCDR	ALIGN GDC TO IMU	
		09-571	MSTC	SCDR	PANEL 1 FDAI SOURCE SW - CMC FDAI SELECT SW - 1/2	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-571			NOTE IF A HOLD SHOULD OCCUR AFTER THIS TIME, THE ABOVE PROCEDURE WILL BE USED TO UPDATE THE AZIMUTH.	
		09-572	MSTC	SCDR	PANEL 8 AUTO RCS SELECT A/C ROLL A1 SW - OFF C1 SW - OFF A2 SW - OFF C2 SW - OFF B/D ROLL B1 SW - MNA D1 SW - MNB B2 SW - MNA D2 SW - MNB PITCH A3 SW - MNB C3 SW - MNA A4 SW - MNA C4 SW - MNB YAW B3 SW - MNA D3 SW - MNB B4 SW - MNB D4 SW - MNA	 008S017 008S018 008S019 008S020 008S021 008S022 008S023 008S024 008S025 008S026 008S027 008S028 008S029 008S030 008S031 008S032
					NOTE AT T-12 00, LV RATE AND GUID LITES WILL FLASH.	
		09-573	MSTC	MREC	STANDBY FOR CTE UPDATE	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-15 00		09-574	MSTC	HFLT	PERFORM CTE UPDATE	
			MREC		CTE UPDATE VERIFIED	
		09-575	MCSE	MSTC	RF TERMINAL COUNT COMPLETE.	
		09-576	MSTC	MEPE	PS2, 3, 4, 7, 8 COMMIT LOCKOUT - ON	C076
			MEPE		22 0213 3441 IS INSERTED	
			MEPE		PS 2, 3, 4, 7, 8 LOCKOUT ON LITE ON	GC5137
		09-577	MSTC	SCDR	PANEL 1	
					FDAI 1 TOTAL ATT R = LAUNCH AZ +90 DEG. P = 90 DEG Y = 0 DEG	
					BMAG MODE ROLL SW - RATE 1 PITCH SW - RATE 1 YAW SW - RATE 1	 001S020 001S021 001S022
					FDAI SCALE SW - ERR 5 RATE 5	001S003
				MSCR	ERR 5 RTE 5 LITE ON	CH3592
		09-578	MSTC	SCDR	PANEL 1	
					RATE SW - HIGH	001S012
				MSCL	RATE SW HIGH LITE ON	CH3590
		09-579	MSTC	SCDR	RHC 2 - ARMED	
		09-580	MSTC	SCMP	RHC 1 - ARMED	
		09-581	MSTC	SCDR	PANEL 1	
					ROT CONTR PWR DIRECT 1 SW - MNA/MNB DIRECT 2 SW - MNA/MNB CMC MODE SW - FREE TRANS CONT PWR SW - ON-UP	 001S013 001S067 001S019 001S066

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-582	MSTC	CVTS	SEND LOM TO CH 214 FOR COMM CHECKS	
		09-583	MSTC	CSTO	PUT ASTRO-LAUNCH CIRCUIT ON VHF	
		09-584	MSTC LOM CSTO		PERFORM COMM CHECK WITH SCDR VIA VHF ON ASTRO LAUNCH CIRCUIT.	
		09-585	MSTC	CSTO	1. PUT ASTRO-LAUNCH CIRCUIT ON UMBILICAL. 2. RELEASE VHF.	
		09-586	MSTC LOM CSTO		PERFORM COMM CHECK WITH SCDR VIA UMBILICAL ON ASTRO LAUNCH CIRCUIT.	
		09-587	MSTC	CSTO	PUT CSM CH 214 ON UMBILICAL AND VHF.	
		09-588	MSTC	HFLT	PERFORM COMM CHECK WITH SLMP 'S-BAND', SCMP 'VHF' AND SCDR 'SIMUL VHF/S-BAND'	
		09-589	MSTC	SCDR	PANEL 1 SPS THRUST SW - NORMAL 001S023 DV THRUST A SW - OFF (GUARDED) 001S026 B SW - OFF (GUARDED) 001S059 LV/SPS IND ALPHA SW - ALPHA 001S052	
		09-590	MSTC	SCMP	PANEL 2 EDS AUTO SW - (ON-UP) 002S067 ABORT SYS LV RATE SW - AUTO 002S065 2 ENG OUT SW - AUTO 002S064 RCS CMD SW - OFF, REL 002S043	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		09-591		SCDR	PANEL 7	
					TVC SERVO PWR	
					1 SW - AC1/MNA	007S008
					2 SW - AC2/MNB	007S009
		09-592	MSTC	SLMP	PANEL 2	
					SEC COOL LOOP PUMP OFF	
					(TIME)	
-10 00		09-593	MSTC	SLMP	PANEL 3	
					FC REAC VLV SW - LATCH	
-08 30		09-594	MSTC	ALL	CONTROL ROOM RECORDERS TO 5 MM/SEC MINIMUM.	
-08 00		09-595	MSTC	ALL	GIVE FINAL STATUS	

MACE _____	MSPS _____	SCDR _____
MECS _____	MRCS _____	SCMP _____
MEPS _____	MREC _____	SLMP _____
MSEQ _____	MCSE _____	GMIL _____
MGNS _____	MMED _____	HFLT _____
MSCS _____	MLFC _____	MTPE _____
	MBSE _____	CSAT _____

		09-596	MSTC	KSTC	VERIFY GO FOR LAUNCH.	
-06 00		09-597	MSTC	CSAT	S/C READY - ON	
		09-598	MSTC	CVTS	SC IS GO FOR LAUNCH. READY SW IS ON. SEND LOM TO ASTRO LAUNCH COMM CIRCUIT AT T-04 00.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		09-598			NOTE FOR REMAINDER OF COUNTDOWN, CONTROL ROOM READOUTS AND FUNCTIONS WILL BE PERFORMED BY THE CLOCK TIME AND PER THE PROCEDURE TO REDUCE TALK OVER OIS.	
-04 10		09-599	SCDR		LV ENG OUT LITES (5) ON	
-04 00		09-600	MSTC	CSTO	PUT ASTRO LAUNCH CIRCUIT ON VHF AND UMBILICAL.	
		09-601		MSTC LOM CSTO	PERFORM ASTRO LAUNCH CIRCUIT COMM CHECK.	
-03 08		09-602			LAUNCH SEQUENCE START (L/V) (SIMULATE)	
-03 00		09-603	MSTC	SCMP	PANEL 2 DSKY VERIFY P02	
					CAUTION DO NOT ENTER THE FOLLOWING INSERT..	
		09-604	MSTC	SCMP	PANEL 2 DSKY INSERT V75	
		09-605	MSTC	SLMP	PANEL 3 TAPE RCDR FWD SW - FWD TAPE MOTION TB GRAY	0035051
				MREC	DSE MOTION LITE ON	CT0012

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-02 15		09-605		MECE	ECS BYPASS - ON	KF7011 R025 KF7097 R021
					ECS SOV - OFF	KF7090 R023 KF7010 R027
		09-606	MSTC	SCDR	PANEL 325	
					GLY TO RAD PRIM VLV - (PULL, BYPASS)	
				MECS	PRIM PUMP GLY PRESS PSIG (P9-2) -----	CF0016
					ACCUM PRIM QTY PCNT (P9-3) -----	CF0019
-01 15		09-607	MSTC	SLMP	PANEL 5	
					MN BUS TIE BAT A/C SW - (ON-UP)	005S004
					BAT B/C SW - (ON-UP)	005S005
				MEPS	ENTRY BATTS ON MN BUSES	
-01 00		09-608	MSTC	SCDR	PANEL 9, 6	
					PAD COM SW - OFF VHF AM VOL TW - INCREASE TO ABOVE NORMAL LISTENING LEVEL.	
-00 45		09-609	MSTC	SCDR	PANEL 1	
					GDC ALIGN PB - PUSH, UNTIL ALIGNED	001S035
					PANEL 2	
					FDAI 2 TOTAL ATTITUDE STABILIZED	
		09-610	MSTC	SCDR	PANEL 1	
					GDC ALIGN PB - RELEASE	001S035
-00 11		09-611	MSTC	CSTO	RELEASE UMBILICAL ONLY.	
		09-612			*** CDDT TERMINATED ***	
		09-613	MSTC		PROCEED WITH RECYCLE FROM CDDT. PER SEQ. 11.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		10-000			SCRUB/RECYCLE ----------	
					NOTE UTILIZE FOLLOWING RECYCLE PROCEDURES AT DISCRETION OF MSTC IN THE EVENT OF A SCRUB/ RECYCLE CONDITION DURING CDDT COUNTDOWN.	
					CAUTION IN THE EVENT OF A HOLD, PERFORM THE FOLLOWING, IN THE ORDER SHOWN, FOR CONDITIONS INDICATED. (TIMES IN MINUTES AND SECONDS).	
					-------- HOLD INSIDE T-15 00 --------	
		10-001	MSTC	MEPE	PS 2, 3, 4, 7, 8 COMMIT LOCKOUT - OFF	KC7703 C076
			MEPE		22 0213 3440 IS INSERTED	
			MEPE		PS 2, 3, 4, 7, 8 LOCKOUT ON LITE OFF	GV0126
	214	10-002	MSTC	CSTO	PUT UMB ON CH 214 PUT VHF ON CH 214	
		10-003	MSTC	SCDR	PANEL 7 TVC SERVO PWR 1 SW - OFF 2 SW - OFF	 007S008 007S009
		10-004	MSTC	SLMP	PANEL 3 FC REACS VLV SW - NORM	 003S076
					-------- HOLD INSIDE T-04 00 --------	
		10-005	MSTC	CSTO	PUT CSM CH 214 ON VHF + UMBILICAL.	
		10-006	MSTC	SCMP	PANEL 2 DSKY V34 E	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS

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TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		10-006			-------- HOLD INSIDE T-03 00 --------	
		10-007	MSTC	SLMP	PANEL 3	
					TAPE RCDR FWD SW - OFF	003S051
					(TAPE MOTION TB B/P)	
					-------- HOLD INSIDE T-02 15 --------	
		10-008	MSTC	SCDR	PANEL 325	
					GLY TO RAD PRIM VLV - (PUSH, NORMAL)	
		10-009	MSTC	MECE	ECS SOV - ON	KF7090 R023 KF7010 R027
					ECS BY PASS - OFF	KF7011 R025 KF7097 R021
					-------- HOLD INSIDE T-01 15 --------	
		10-010	MSTC	SLMP	PANEL 5	
					MN BUS TIE	
					BAT A/C SW - OFF THEN AUTO	005S004
					BAT B/C SW - OFF THEN AUTO	005S005
				MEPS	ENTRY BATTS OFF MAIN BUSSES	

NOTE

CSM IS NOW IN CONFIGURATION FOR A HOLD AT T-22 00(NOMINAL L/V HOLD/RECYCLE POINT). WHEN COUNT RESUMES, CSM PICKS UP FUNCTIONALLY AT T-15 00.

NOTE

IN EVENT OF SCRUB, PERFORM REMAINDER OF THIS SEQ.

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		10-011	MSTC	SCDR	PANEL 8	
					SECS	
					PYRO ARM A SW - SAFE	008S010
					PYRO ARM B SW - SAFE	008S014
					LOGIC 1 SW - OFF	008S011
					LOGIC 2 SW - OFF	008S015
		10-012	MSTC	CVTS	VERIFY CLEARANCE TO EGRESS FLIGHT CREW.	
		10-013	MSTC	SCDR	PANEL 9	
					PAD COMM SW - T/R	
		10-014	MSTC	SLMP	PANEL 6	
					PAD COMM SW - T/R	
		10-015	MSTC	CSTO	PUT UMB ON CH 214 PUT VHF ON CH 214	
		10-016	MSTC	SPAD	1. RETURN TO PAD WITH CLOSEOUT CREW. REPORT WHEN ON STATION. 2. PROTECTIVE CLOTHING REQUIRED. 'REF. SECT 1, PARA 5.6'	

NOTE

FOLLOWING PERSONNEL REQUIRED ON PAD FOR HATCH OPENING AND CREW EGRESS.

SA-9	PAD APRON
SPAD	VAN DRIVER
SCMP (TECH)	VAN ESCORT
SLMP (TECH)	PVSS
SSSA	
SCMT	
SGQC	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		10-017	MSTC	MSEQ	VERIFY PYRO AND LOGIC BUSSES SAFE	
		10-018	MSTC	SCDR	PANEL 7	
					EDS PWR SW - OFF	007S001
			MSEQ		EDS VOTE 1 OUT LITE OFF	CD0132
					EDS VOTE 2 OUT LITE OFF	CD0133
					EDS VOTE 3 OUT LITE OFF	CD0134
		10-019	MSTC	CVTS	1. CSM BUSSES ARE SAFE	
					2. EDS POWER IS OFF	
		10-020	MSTC	MACE	R112-0000 RECONFIGURE DECOMMS FOR 204.8 AND 51.2 KB HARDLINE	
		10-021	MSTC	SCDR	PANEL 8	
					AUTO RCS SELECT	
					A/C ROLL A1 SW - OFF	008S017
					A/C ROLL C1 SW - OFF	008S018
					A/C ROLL A2 SW - OFF	008S019
					A/C ROLL C2 SW - OFF	008S020
					B/D ROLL B1 SW - OFF	008S021
					B/D ROLL D1 SW - OFF	008S022
					B/D ROLL B2 SW - OFF	008S023
					B/D ROLL D2 SW - OFF	008S024
					PITCH A3 SW - OFF	008S025
					PITCH C3 SW - OFF	008S026
					PITCH A4 SW - OFF	008S027
					PITCH C4 SW - OFF	008S028
					YAW B3 SW - OFF	008S029
					YAW D3 SW - OFF	008S030
					YAW B4 SW - OFF	008S031
					YAW D4 SW - OFF	008S032
		10-022	MSTC	SCDR	PANEL 1	
					EMS FUNCTION SEL - OFF	
					EMS MODE SW - STBY	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		10-022			CMC ATT SW - IMU	001S002
					FDAI	
					SCALE SW - ERR 5/RATE 5	001S003
					SELECT SW - 1	001S004
					SOURCE SW - GDC	001S005
					ATT SET SW - GDC	001S006
					MAN ATT	
					ROLL SW - RATE CMD	001S007
					PITCH SW - RATE CMD	001S008
					YAW SW - RATE CMD	001S009
					LIMIT CYCLE SW - OFF	001S010
					ATT DEADBAND SW - MIN	001S011
					RATE SW - LOW	001S012
					TRANS CONTR PWR SW - OFF	001S066
					ROT CONTR PWR	
					NORM 1 SW - OFF	001S064
					NORM 2 SW - OFF	001S065
					DIRECT 1 SW - OFF	001S013
					DIRECT 2 SW - OFF	001S067
					SC CONT SW - SCS	001S018
					BMAG MODE	
					ROLL SW - RATE 2	001S020
					PITCH SW - RATE 2	001S021
					YAW SW - RATE 2	001S022
					SPS THRUST SW - NORMAL	001S023
					DV THRUST	
					A SW - OFF (GUARDED)	001S020
					B SW - OFF (GUARDED)	001S059
					SCS TVC	
					PITCH SW - AUTO	001S038
					YAW SW - AUTO	001S039
					SPS GMBL MOT	
					PITCH 1 SW - OFF	001S040
					PITCH 2 SW - OFF	001S041
					YAW 1 SW - OFF	001S042
					YAW 2 SW - OFF	001S043
					DVCG SW - CSM	001S054
					ENTRY	
					EMS ROLL SW - OFF	001S050
					.05 G SW - OFF	001S051
					LV/SPS IND SII/SIVB SW - GPI	001S053
					TVC GMBL DR	
					PITCH SW - 1	001S027
					YAW SW - 1	001S028

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		10-023	MSTC	SCDR	PANEL 2	
					RCS CMD SW - OFF, REL	002S043
		10-024	MSTC	SCDR	PANEL 1	
					GDC ALIGN PB - PUSH, HOLD 15 SEC	
		10-025	MSTC	SCDR	PANEL 7	
					SCS	
					ELEC PWR SEL - OFF	007S005
					FDAI/GPI PWR SEL - OFF	007S003
					BMAG PWR	
					1 SEL - OFF	007S006
					2 SEL - OFF	007S007
				MSCR	RECORD TIME TABLE 1	
			MSCL		GYRO 1 SMRD LITE ON	CH3623
					GYRO 2 SMRD LITE ON	CH3624
		10-026	MTPE	SCDR	PANEL 7	
					SCS	
					TVC SERVO PWR	
					1 SW - OFF	007S008
					2 SW - OFF	007S009
					LOGIC PWR 2/3 SW - OFF	007S010
					SIG COND/DR BIAS PWR	
					1 SW - OFF	007S011
					2 SW - OFF	007S012
		10-027	MSTC	SCDR	PANEL 8	
					SCS	
					TVC AC 1 CB - OPEN	008C055
					AC 1 CB - OPEN	008C009
					AC 2 CB - OPEN	008C010
					ECA/TVC AC2 CB - OPEN	008C054
					DIRECT ULL	
					MN A CB - OPEN 'GUARDED'	008C072
					MN B CB - OPEN 'GUARDED'	008C073
					CONTR/DIRECT	
					1 MN A CB - OPEN	008C013
					1 MN B CB - OPEN	008C014
					2 MN A CB - OPEN	008C070
					2 MN B CB - OPEN	008C071

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		10-027			A/C ROLL	
					MN A CB - OPEN	008C015
					MN B CB - OPEN	008C016
					B/D ROLL	
					MN A CB - OPEN	008C017
					MN B CB - OPEN	008C018
					PITCH	
					MN A CB - OPEN	008C019
					MN B CB - OPEN	008C020
					YAW	
					MN A CB - OPEN	008C021
					MN B CB - OPEN	008C022
					ORDEAL	
					AC2 CB - OPEN	008C065
					MN B CB - OPEN	008C064
					SCS	
					CONTR/AUTO	
					MN A CB - OPEN	008C074
					MN B CB - OPEN	008C075
					LOGIC BUS	
					1/2 MN A CB - OPEN	008C063
					3/4 MN A CB - OPEN	008C023
					1/4 MN B CB - OPEN	008C062
					2/3 MN B CB - OPEN	008C024
					SYS	
					MN A CB - OPEN	008C011
					MN B CB - OPEN	008C012
					RCS LOGIC	
					MN A CB - OPEN	008C043
					MN B CB - OPEN	008C044
					EMS	
					MN A CB - OPEN	008C052
					MN B CB - OPEN	008C053
					SPS	
					PITCH 1 BAT A CB - OPEN	008C031
					PITCH 2 BAT B CB - OPEN	008C032
					YAW 1 BAT A CB - OPEN	008C033
					YAW 2 BAT B CB - OPEN	008C034
		10-028	SPAD	MSTC	1. CLOSEOUT CREW ON STATION.	
					2. RESUSCITATOR FROM ML RESCUE LOCKER AND 1 EEAP FROM HOLDER ARE POSITIONED ON W/R HOOD TO RIGHT OF CM HATCH.	*1

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		10-029	MSTC	SPAD	1. RE-INSTALL ENVIRONMENTAL CHAMBER PANELS. REPORT COMPLETION.	------- NASA QC
					A. CLOSE E/C AND TRUSS DOORS.	
					B. RETRACT LEFT SIDE HINGED HOOD SECTION AND LOCK.	
					C. INSTALL REMOVABLE HOOD SECTIONS.	
					D. INSTALL HOOD SUPPORT KNOB.	
					E. RETRACT E/C HOOD JACK SCREWS (2 EA).	
					2. VERIFY POVS AVAILABLE FOR FLIGHT CREW.	
		10-030	SPAD	MSTC	E/C PANELS INSTALLED.	
		10-031	MSTC	SLMP	SET BPC HATCH RELEASE SEL - AWAY FROM BPC JETT	
		10-032	MSTC	SPAD	OPEN BPC AND HATCH PER T/S 8.2.6.2.6	------- NASA QC
		10-033	MSTC	SCDR SLMP	VERIFY/LOCK HAND CONTROLERS AND STOW (2 EA) ARM RESTS	
		10-034	SPAD	MSTC	CM HATCH IS OPEN.	
		10-035	MSTC	SCDR	PANEL 380	
					SUIT RET AIR VLV - PULL OPEN	
		10-036	MSTC	SCDR SCMP SLMP	REMOVE GLOVES AND THEN HELMETS AND PASS FROM CM	
		10-037	MSTC	SCDR	PANEL 7	
					DIRECT 02 VLV - CLOSE (CW)	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		10-038	MSTC	SCMP	PANEL 2	
					SUIT CKT H2O ACCUM AUTO SW - CENTER	
					CABIN FAN	
					1 SW - OFF	002S029
					2 SW - OFF	002S030
				MECE	TIME	

		10-039	MSTC	SLMP	PANEL 4	
					SUIT COMPR	
					2 SW - OFF	004S007
					1 SW - OFF	004S006
				MECS	TIME	

		10-040	MSTC	SCDR	DISCONNECT COU FROM PGA. OBTAIN SUIT	
				SCMP	CIRCUIT INTERCONNECT FROM SPAD AND	
				SLMP	CONNECT SUPPLY AND RETURN NOZZLES OF	
					COU TOGETHER.	
		10-041	MSTC	SLMP	PANEL 6	
					SUIT PWR SW - OFF	006S007
					PWR SW - OFF	006S006
		10-042	MSTC	SCDR	PANEL 9	
					SUIT PWR SW - OFF	009S007
					PWR SW - OFF	009S006
		10-043	MSTC	SCMP	PANEL 10	
					SUIT PWR SW - OFF	010S007
					PWR SW - OFF	010S006
		10-044	MSTC	GMIL	RELEASE VHF U/L CONSTANT KEY	
		10-045	MSTC	SPAD	CONTINUE EGRESS	
		10-046	SPAD	SCDR	DISCONNECT CCU FROM PGA.	
				SCMP		
				SLMP		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		10-047	SPAD	SCMP	EGRESS FROM CM AND CONNECT POV TO PGA IF DESIRED RECORD _____ TIME	
		10-048	SPAD	SLMP	EGRESS FROM CM AND CONNECT POV TO PGA IF DESIRED RECORD _____ TIME	
		10-049	SPAD	SCDR	EGRESS FROM CM AND CONNECT POV TO PGA IF DESIRED. RECORD _____ TIME	
		10-050	SPAD	MSTC	CREW EGRESS COMPLETE	
		10-051	MSTC	SSSA	RETURN CREW TO MSOB.	
		10-052	MSTC	CVTS	1. FLIGHT CREW EGRESS IS COMPLETE. 2. CREW RETURNING TO MSOB. 3. CLEAR TO TERMINATE CAMERA 25 VIDEO RECORDING. NOTE REMAINING REFERENCES TO SCDR, SCMP AND SLMP ARE FOR CSM TECHNICIANS.	
		10-053	MTPE	SCMP SLMP	INGRESS CM (SCMP TO LEB)	
		10-054	MTPE	SPAD	1. REINSTALL PYRO ARM SW GUARD 2. RETAIN PYRO ARM SW KEY. 3. RECONFIGURE PTC HEATER CABLE. REPORT COMPLETION. 4. RETURN 1 EEAP TO HOLDER IN W/R AND 1 RESUSCITATOR TO ML RESCUE LOCKER.	------- NASA QC ------- NASA QC ------- NASA QC ------- NASA QC *1

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		10-055	MSTC	CVTS	1. PYRO ARM SW IS LOCKED IN SAFE	
					2. SPAD HAS PYRO ARM SW KEY	
		10-056	MSTC	HFLT	EXECUTE ACE G AND N UPLINK ENABLE (RTC 11, 15)	
				MCSE	VERIFY UDL VALIDITY SIGNALS (2)	
		10-057	MTPE	SCMP	PANEL 2	
					UP TLM CM SW - ACCEPT	
		10-058	MTPE	MQLD GMIL	TURN OFF ALL RECORDERS AND STANDBY FOR LOS.	
		10-059	MTPE	SLMP	PANEL 3	
					S BAND AUX	
					TV SW - OFF	003S037
					TAPE SW - OFF	003S036
					S BAND NORM	
					PWR AMPL HI SW - CTR	003S032
					XPNDR SW - OFF	003S029
					UP TLM CMD SW - OFF	003S039
					POWER PMP SW - OFF	003S054
					VHF AM	
					A SW - OFF	003S043
					B SW - OFF	003S044
					VHF BCN SW - OFF	003S045
		10-060	MSTC	CVTS	CSM RF IS OFF. CSM CMD DECODER IS OFF. GMIL SUPPORT NO LONGER REQUIRED	
		10-061	MTPE	MGNS	PROCEED WITH G+N DEACTIVATION.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		10-062	MGNS	MGNR	K148 INSERT	
					V36 E WAIT 10 SECONDS V41N20 E +00000 E +00000 E +09000 E	
					* WAIT 15 SEC *	
			MGNL		NO ATT LITE ON ZG8094 GIMBAL LOCK LITE ON ZG8035	
					CDU ANGLES (P5-14)	
					X/OG DEG -----	0 +/- 3
					Y/1G DEG -----	0 +/- 3
					Z/MG DEG -----	+90 +/- 3
					NOTE VERIFY CDU ANGLES ARE WITHIN '1' DEG OF DESIRED. IF NOT REPEAT PREV SEQ.	
		10-063	MGNS	SCMP	PANEL 100	
					G+N POWER IMU - OFF 100S002	
				MGNL	TIME ----------	
					CAUTION IMU HEATER POWER MUST BE OFF LESS THAN 15 MIN. TO PREVENT POSSIBLE DAMAGE TO THE IMU.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		10-064	MGNS	SCMP	VERIFY PTC CABLE CONNECTED TO PSA 45J2	------- NASA QC
					CAUTION DO NOT PROCEED UNTIL PTC CABLE CONNECTED	
		10-065			--- PTC RECABLING ---	
					NOTE IF PTC CABLE IS NOT CONNECTED, RECONFIGURE AS FOLLOWS..	
		10-066	MGNS	UFET	VERIFY PTC POWER OFF	
		10-067	MGNS	SCMP	REMOVE DUST COVER FROM PSA 45J2 CONNECT W001C TO PSA 45J2	------- NASA QC
		10-068	MGNS	UFET	NOTIFY AFET PTC POWER IS COMING ON.	
					PTC POWER SW - ON RESET ALARMS AS REQUIRED	
					--- END OF PTC RECONFIGURATION ---	
		10-069	MGNS	SLMP	PANEL 5	
					G AND N IMU MNA - OPEN 005C056 MNB - OPEN 005C057 IMU HTR MNA - OPEN 005C058 MNB - OPEN 005C059	
			MGNL		TIME ----------	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		10-070	MGNS	UFET	VERIFY AN OPERATIONAL PTC	
		10-071	MGNS	MGNR	K148 INSERT V23N20 E 0 E	
			MGNL		GIMBAL LOCK LITE OFF	ZG8035
		10-072	MGNS	MGNR	K148 INSERT (FRESH START) V21N01 E 1036 E 40000 E	
			MGNL		NO ATT LITE OFF	
		10-073	MGNS	MTPE	CMC DEACTIVATION WILL CAUSE MASTER ALARM AND MAY CAUSE LOS.	
		10-074	MGNS	SCMP	PANEL 5	
					G AND N COMPUTER MNA CB - OPEN MNB CB - OPEN	 005C060 005C061
			MGNL		TIME ----------	
		10-075	MGNS	SLMP	PANEL 5	
					POWER SWITCH - OFF POWER AC1 CB - OPEN AC2 CB - OPEN OPTICS MNA - OPEN MNB - OPEN	005S012 005C054 005C055 005C062 005C063
		10-076	MGNS	MTPE	G+N POWER DOWN COMPLETED.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		10-077	MTPE	SCMP	PANEL 2	
					SM RCS PRPLNT	
					A SW - OFF, REL	002S047
					B SW - OFF, REL	002S048
					C SW - OFF, REL	002S049
					D SW - OFF, REL	002S050
					SM RCS PRIM PRPLNT TB (4) - B/P	
					SM RCS SEC PRPLNT TB (4) - B/P	
		10-078	MTPE	SCDR	PANEL 8	
					RCS SM HTRS	
					A MN B CB - OPEN	
					C MN B CB - OPEN	
					B MN A CB - OPEN	
					D MN A CB - OPEN	
		10-079			NOTE	
					1. WAIT FOR MSS TO BE POSITIONED (APPROX. T+4 HRS).	
					2. PROCEED WITH SERVICE STRUCTURE POWER UP WHEN CABLE INSTALLATION IS COMPLETE.	
		10-080	MTPE	SNQC	1. PROCEED WITH POST CREW EGRESS	
				SGQC	INSPECT PER T/S 8.2.6.3.	
					2. REPORT COMPLETION	------ -------
						NR QC NASA QC
+04 00		10-081	MTPE	SPAD	PROCEED WITH MSS RECABLE PER T/S 8.2.7.6.1 THRU 8.2.7.6.4	
					REPORT COMPLETION.	------
						NR QC
		10-082	MTPE	MEPS	POWER UP MSS	
					MSS POWER UP	

		10-083	MEPS	CSGS	MSS ACE PS INPUT - ON	
				CSGS	ACTIVATE LITE ON	
				SPDS	C14-626 (PS 1)	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		10-083			AC INPUT ON LITE ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		10-084	MEPS	CSGS	MSS ACE PS OUTPUT ON	
			CSGS		ACTIVATE LITE ON	
			SPDS		C14-626 (PS 1) DC OUTPUT ON LITE ON	
		10-085	MEPS	CSGS	MSS ACE PS BAT ENABLE - ON ACTIVATED LITE ON	
		10-086	MEPS	CSGS	MSS CSM ACE BUS - ON	
			CSGS		ACTIVATE LITE ON	
			SPDS		C14-628 (PS 1) FEEDER BUS BCN LITE ON	
		10-087	MEPS	CSGS	MSS LM ACE BUS ON	
			CSGS		ACTIVATE LITE ON	
		10-088	MEPS	SFET	C14-240 CONSOLE PWR CONTROL AC PWR SW - ON	
			SFET		PWR ON LITE ON	
		10-089	MEPS	SFET	DC PWR +28 VDC SW - ON	
			SFET		+28 VDC PWR ON LITE ON VOLTAGE _____ VDC	28 +/- 1 VDC
		10-090	MEPS	SFET	DC PWR +12V SW - ON	
			SFET		+12V PWR ON LITE ON VOLTAGE _____ VDC	12 +/- 1 VDC
		10-091	MEPS	SFET	DC PWR +6V SW - ON	
			SFET		+6V PWR ON LITE ON VOLTAGE _____ VDC	6 +/- 1 VDC

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		10-092	MEPS	SFET	DC PWR -12V SW - ON	
				SFET	-12V PWR ON LITE ON	
					VOLTAGE _____ VDC	-12 +/- 1 VDC
					BLOWER IS OPERATING	
		10-093	MEPS	SFET	C14-484	
					GND SW - ACE/STU	
					PRIME PWR SW - AC	
					AC SW - ON	
					VERIFY AC LITE ON	
					VERIFY BLOWER OPERATING	
					AM-1 SW - ON	
					VERIFY AM-1 LITE ON	
					AM-2 SW - OFF	
					AM-3 SW - OFF	
					EM-1 SW - OFF	
		10-094	MEPS	SFET	C14-268	
					PWR ON SW - ON	
		10-095	MEPS	MACE	EXECUTE THE FOLLOWING INSERT	
					D C B A	
					R114 1 0 1 0	
				MACE	SYNC ACQUIRED	
				MEPE	PS 1 OUTPUT LITE ON	GC5138
					GSE BUS PS 1 OUTPUT IS 29 +1 VDC (P2-23)	GC5149
		10-096	MEPS	MACE	ACTIVATE DTCS SURVEILLANCE	
					33 0010 5106	
					33 0010 5~~102~~ 103	
					VERIFY GO CONDITION OF DTCS AND STANDARDS.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		10-097	MEPS		P/S 5 AC START (R094) - ON	KC7709
			SPDS		C14-626 P/S 5 AC INPUT POWER ON LITE ON	
		10-098	MEPS		P/S 5 DC ON (R094) - ON	KC7710
			SPDS		C14-626 P/S 5 DC OUTPUT POWER ON LITE ON	
			MEPE		P/S 5 OUTPUT ON LITE ON	GC5143
					P/S 5 OUTPUT VDC INDICATES 31 +/- 1	GC5146
					GSE BUS P/S 5 IS 31 +/- 1 VDC (P2-23)	GC5150
					P/S 5 BAT EN LITE OFF	GC5145
					P/S 5 BAT ON LITE OFF	GC5144
		10-099	MEPS	MEPE	FEEDER BUS B (C076) - ON	KC7713
				MEPE	220 3234 321 IS INSERTED	
				MEPE	P/S 5 GSE BUS B ON LITE ON	GC5147
			SPDS		C14-628 P/S 5 FEEDER BUS B ON LITE ON	
		10-100	MEPS	MEPE	FEEDER BUS C (C076) - ON	KC7714
				MEPE	220 3234 331 IS INSERTED	
				MEPE	P/S 5 GSE BUS C ON LITE ON	GC5148
			SPDS		C14-628 P/S 5 FEEDER BUS C ON LITE ON	
		10-101	MEPS	MEPS	P/S 5 BATT ENABLE (R094) - ON	KC7711
			MEPE		P/S 5 BAT EN LITE ON	GC5145
			SPDS		C14-628 P/S 5 BATTERY ON LITE ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		10-102	MEPS		PS 1 BAT ENABLE ON	
					NOTE IF CRYOGENIC TOP-OFF IS REQUIRED PERFORM FOLLOWING STEPS.	
					NOTE FOLLOWING TIMES IN HOURS/MIN.	
+11 00		10-103	MTPE	SPAD MLFC	1. PERFORM FOLLOWING SEQUENCES OF VOL II SETUPS... 8.2.7.4.1 8.2.7.4.11 8.2.7.4.2 8.2.7.4.12 8.2.7.4.3 8.2.7.4.4 8.2.7.4.5 8.2.7.4.6 8.2.7.4.7 8.2.7.4.8 8.2.7.4.9 8.2.7.4.10 REPORT COMPLETION ------ ------- NR QC NASA QC	
					2. CONNECT STUB TOWER CRYO LINES PER OCP-K-10027	
					3. COORDINATE RECONNECTION OF GH2 AND G02 TRAILERS TO S14-032 AND S14-026 UPON RETURN BY SUPPORT PERSONNEL	
					4. COORDINATE WITH MLFC FOR RE-INSTALLATION OF GH2, G02, GN2, GHE K-BOTTLES FOR CRYO SERVICING.	
					5. RECONFIGURE OPTICS COVERS PER T/S T/S 8.2.7.3.8 (IF REQUIRED)	
					6. REPORT COMPLETION ------ ------- NR QC NASA QC	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		10-104	MSTC	CVTS	1. HAVE SUPPORT PERSONNEL PROVIDE GH2 TRAILERS (2) AND GO2 TRAILERS (2) FOR CONNECTION TO S14-026 AND S14-032 2. REPORT COMPLETION	
+18 00		10-105	MTPE	SLFC	START F/C ENGR WALKDOWN. REPORT COMPLETION.	
		10-106	MTPE	SPAD	HAVE FOLLOWING STATIONS PERFORM PLACARDS. REPORT COMPLETION ON F/C CHANNEL 224. SOMD SLOT SHFD SLHT SLOM PLHM SLHM PLOM	
+19 00		10-107	MTPE	MLFC	PROCEED WITH CRYO RECYCLE OPERATIONS PER SEQ. 30V2.	
+20 00		10-108	SPAD	MTPE	CRYO SERVICING GSE INSTALLED AND CONNECTED.	
		10-109	MLFC	MTPE	GSE POWER UP COMPL. ENGR WALKDOWN COMPL. PROCEEDING WITH GSE LK CKS.	
		10-110	MTPE	ALL	PERFORM TEST SETUPS PER SECT 8.1.2 REPORT COMPLETION NR QC NASA QC	
+23 00		10-111	MLFC	MTPE	GSE LK CKS COMPL. PROCEEDING WITH PURGING. REQUEST CPSS CLEARANCE FOR FLOW OF GO2 AND GH2.	
		10-112	MTPE	MLFC	PROCEED WITH GO2 AND GH2 PURGING.	
+26 00		10-113	MTPE	MLFC	PROCEED WITH CRYO DETANKING OR TOP-OFF. REPORT COMPLETION.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		10-113			NOTE AFTER CRYO OPERATIONS COMPLETE PROCEED WITH S/C AND GSE POWER DOWN OR PICK UP AT T-28 00 HOURS.	
					NOTE IN EVENT OF TOTAL SCRUB, PROCEED WITH REMAINDER OF THIS SEQ.	
		10-114	MTPE	MEPS	PROCEED WITH SC POWER DOWN	
		10-115	MTPE	SLMP	PANEL 4 ECS GLYCOL PUMP SEL - OFF (TIME)	
		10-116	MTPE	SCDR	PANEL 326 SM 02 SUPPLY - OFF 02 REPRESS PKG VLV - FILL 02 SURGE TK VLV - ON	
				SCDR	PANEL 601 LIFT COVER ALTERNATELY OPEN AND CLOSE REPRESS 02 VLV TO BLEED EMER 02 SYS TO AMBIENT +50 PSI AS INDICATED ON EMER 02 GAGE (PANEL 602)	
					(DELETED.)	*1
		10-117	MEPS	SCMP	PANEL 2 STATUS C/W LITES C/W PWR SW - OFF (CTR)	
		10-118	MEPS	SLMP	PANEL 5 C/W MNA CB - OPEN C/W MNB CB - OPEN	005C052 005C053
		10-119	MEPS	ALL	STANDBY FOR MOMENTARY LOS.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		10-120	MEPS	MACE	GO TO INTERNAL TIMING. DISABLE CM A/B DATA R112-1010.	
		10-121	MEPS	SLMP	PANEL 4	
					TEL COM	
					GRP 1 SW - OFF	004S004
					GRP 2 SW - OFF	004S005
					PANEL 5	
					INST	
					ESS MNA CB - OPEN	005C019
					ESS MNB CB - OPEN	005C020
			MSEQ		ELS SAFE LITES (8) OFF	CE0310 CE0311 CE0312 CE0313 CE0314 CE0315 CE0316 CE0317
					PANEL 3	
					PWR SCE SW - OFF	003S052
					INV 2 AC BUS 2 SW - OFF	003S065
					INV 1 AC BUS 1 SW - OFF	003S060
					INV 2 SW - OFF	003S058
					INV 1 SW - OFF	003S057
				MEPE	HR MIN SEC ----- ----- -----	
		10-122	MEPS	SLMP	VERIFY AC BUS 1 AND 2 90 VAC MAX	
		10-123	MEPS	SCMP	PANEL 225	
					CTE	
					MNA CB - OPEN	225C021
					MNB CB - OPEN	225C022

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		10-124	MEPS	UFET	C14-205	
					CB 6 - OPEN	
			UFET		CB 6 LITE OFF	
			MEPS		SM MTR SW PS VDC 'P2-21'	GC5030 39+/-
		10-125	MEPS	MEPE	SM MOTOR SW CLOSE - OFF	KC7636 R102
			MEPE		MTR SW OPEN LITE ON	SC2410
		10-126	MEPS	SLMP	PANEL 3	
					VERIFY MN BUS A AND MN BUS B 20 VDC MAX.	
		10-127	MEPS	MEPE	PS A TO BUS A - OFF	KC7024 R100
					PS B TO BUS B - OFF	KC7034 R101
				UFET	C14-205	
					CB 8 THRU 15 LITES OUT	
		10-128	MEPS	SCMP	PANEL 250	
					PYRO A SEQ A CB - OPEN	250C016
					PYRO B SEQ B CB - OPEN	250C017
					BAT A PWR ENTRY AND PL CB - OPEN	250C020
					BAT B PWR ENTRY AND PL CB - OPEN	250C021
					BAT C PWR ENTRY AND PL CB - OPEN	250C022
					BAT C BAT CHGR AND EDS 2 CB - OPEN	250C023
		10-129	MEPS	MSEQ	MESC INDICATE PWR - OFF	KD7021 R084
			MSEQ		MESC SYS A SAFE LITE OFF	CD0084
					MESC SYS B SAFE LITE OFF	CD0085
					LOGIC BUS SAFE LITE OFF	CD0088
					PYRO BUS SAFE LITE OFF	CD0218
					SMJC A SAFE LITE OFF	SD0352
					SMJC B SAFE LITE OFF	SD0353

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		10-130	MEPS	SLMP	PANEL 3 VERIFY ALL DC INDICATOR POSITIONS INDICATE 20 VDC MAX.	
		10-131	MEPS	MTPE	SC POWER DOWN COMPLETE	
		10-132	MTPE	ALL	PROCEED WITH GSE POWER DOWN	
		10-133	MTPE	MECS	POWER DOWN ECS GSE PER SEQ 5, V2.	
		10-134	MTPE	MEPS	POWER DOWN GSE POWER DISTRIBUTION.	
		10-135	MEPS	UFET	C14-205 CB16 - OPEN CB17 - OPEN	
			UFET		CB16 AND 17 LITES OFF	
		10-136	MEPS	UFET	C34-655 PS BATTERY STANDBY SW - OFF DC OUTPUT PWR OFF SW - ON	
			UFET		DC OUTPUT PWR LITE OFF	
		10-137	MEPS	UFET	C34-655 AC STOP SW - ON	
			UFET		AC INPUT PWR ON LITE OFF	
			MEPE		MTR SW GND PS VOLTS 0+2-0 (P1-12)	GC5030
		10-138	MEPS	MEPE	BUS B FLT. OFF	KC7769 R075
			MEPS		GND PWR FILTER BANK B ON LITE - OFF	GC5076
		10-139	MEPE	MEPE	PS B DC ON - OFF	KC7702 R101
			MEPE		GSE BUS PS B IS 0+2-0 (P1-11) PS B OUTPUT ON LITE OFF	GC5128
			LPDS		C14-626 P/S 4 DC OUTPUT POWER LITE OFF	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		10-140	MEPS	MEPE	PS B AC START - OFF	KC7032	R101
			MEPE		GSE BUS PS B IS 0+2-0 (P1-3)	GC5028	
			MEPS		GND PS B INDICATES 0 +/- 1 VDC (M)	GC5028	
			LPDS		C14-626 PS 4		
					AC INPUT POWER ON LITE OFF		
		10-141	MEPS	MEPE	BUS A FLT - OFF	KC7768	R075
			MEPS		GND PWR FLT BANK A ON LITE OFF	GC5075	
		10-142	MEPS	MEPE	PS A DC ON - OFF	KC7698	R100
			MEPE		GSE BUS PS A IS 0+2-0 (P1-11)	GC5132	
					PS A OUTPUT ON LITE OFF	GC5124	
			LPDS		C14-626 PS 3		
					DC OUTPUT POWER ON LITE OFF		
		10-143	MEPS	MEPE	PS A AC START - OFF	KC7022	R100
			MEPE		GND PS VOLTS BUS A IS 0+2-0 (P1-3)	GC5024	
					AC INPUT POWER ON LITE OFF		
					NOTE		
					PS 5 PWR DOWN OPTIONAL		
		10-144	MEPS		PS 5 BATT ENABLE - OFF	KC7711	R094
			MEPS		PS 5 BAT LN LITE OFF	GC5145	
			MEPE		PS 5 BAT EN LITE OFF	GC5145	
			SPDS		C14-628 PS 5		
					BATTERY ON LITE OFF		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		10-145	MEPS	MEPE	FEEDER BUS C - OFF	KC7714 C076
			MEPE		220 3234 330 IS INSERTED	
			MEPE		PS 5 GSE BUS C ON LITE OFF	GC5148
			PSDS		C14-628 PS 5 FEEDER BUS C ON LITE OFF	
		10-146	MEPS	MEPE	FEEDER BUS B - OFF	KC7713 C076
			MEPE		220 3234 320 IS INSERTED	
			MEPE		PS 5 GSE BUS B ON LITE OFF	GC5147
			SPDS		C14-628 PS 5 FEEDER BUS B ON LITE OFF	
		10-147	MEPS		PS 5 DC ON - OFF	KC7710 R094
			MEPS		PS 5 OUTPUT ON LITE OFF GSE BUS PS 5 IS 0+2-0 (P2-23)	GC5143 GC5150
			MEPE		PS 5 OUTPUT ON LITE OFF	GC5143
			SPDS		C14-626 PS 5 DC OUTPUT POWER ON LITE OFF	
		10-148	MEPS		PS 5 AC START - OFF	KC7709 R094
			MEPS		PS 5 OUTPUT VDC INDICATES 0 +/- 1 (M)	GC5146
			MEPE		PS 5 OUTPUT VDC INDICATES 0 +/- 1 (M)	GC5146
			SPDS		C14-626 PS 5 AC INPUT POWER ON LITE OFF	
		10-149	MEPS		PS 1 BAT ENABLE OFF	

NOTE

PS 1 PWR DOWN OPTIONAL

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		10-150	MEPS	CSGS	MSS ACE PS BATT ENABLE - OFF	
			CSGS		ACTIVATED LITE OFF	
			SPDS		C14-628 PS 1 BATTERY ON LITE OFF	
			MEPE		PS 1 BAT LN LITE OFF	GC5140
		10-151	MEPS	CSGS	MSS/CSM ACE BUS - OFF MSS/LEM ACE BUS - OFF	
			CSGS		ACTIVATED LITE OFF	
		10-152	MEPS	CSGS	MSS ACE PS OUTPUT - OFF	
			CSGS		ACTIVATED LITE OFF	
			SPDS		C14-626 (PS 1) DC OUTPUT POWER ON LITE OFF	
		10-153	MEPE	CSGS	MSS ACE PS INPUT OFF	
			CSAT		ACTIVATED LITE OFF	
			SPDS		C14-626 (PS 1) AC INPUT ON LITE OFF	
		10-154	MEPS	MACE	ACTIVATE DTCS SURVEILLANCE 33 0010 5106 33 0010 5104	
		10-155	MEPS	MACE	EXECUTE THE FOLLOWING D C B A R114 1 0 1 1	
			MACE		SYNC ACQUIRED	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		10-155			NOTE PS 2 PWR DOWN OPTIONAL	
		10-156	MEPS	LPDS	C14-628 (PS 2) REMOTE LOCAL SENSING SW - REMOTE	
		10-157	MEPS		PS 2 REMOTE SENSE - OFF	KC7737 R088
		10-158	MEPS	MEPE	PS 2 BAT ENABLE - OFF	KC7682 R071
		10-159	MEPS	CSGS	ML ACE PS BATT ENABLE - OFF	KC7682
			CSGS		ACTIVATED LITE OFF	
			LPDS		C14-628 PS 2 BATTERY ON LITE OFF	
		10-160	MEPS	CSGS	ML CSM ACE (BUS B) OFF SW - OFF ML LEM ACE (BUS A) OFF SW - ON ACTIVATED LITE OFF	
		10-161	UFET		C14-205 CB1, 2, 18 AND 19 LITES OFF	
		10-162	MEPS	CSGS	ML ACE PS OUTPUT - OFF	
			CSGS		ACTIVATED LITE OFF	
			LPDS		C14-626 PS 2 DC OUTPUT POWER ON LITE OFF	
		10-163	MEPS	CSGS	ML ACE PS INPUT - OFF	
			CSGS		ACTIVATED LITE OFF	
			LPDS		C14-626 PS 2 AC INPUT POWER ON LITE OFF	
		10-164	MEPS	CSGS	UNITS 812 + 813 GSE PWR SW - OFF	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		10-165	MEPS	LFET	C14-240 DC PWR -12 V SW - OFF DC PWR +6V SW - OFF DC PWR +12V SW - OFF DC PWR +28 V SW - OFF AC PWR SW - OFF	
				LFET	-12V DC PWR LITE OFF +6V DC PWR LITE OFF +12V DC PWR LITE OFF +28V DC PWR LITE OFF AC PWR LITE OFF	
		10-166	MEPS	LFET	C14-484 AM-1 SW - OFF AM-2 SW - OFF EM-1 SW - OFF AC SW - OFF	
		10-167	MEPS	LFET	C14-346 DC POWER (C14-261) 28 VDC - OFF C14-261 LITE OFF (THRU WINDOW)	
		10-168	MEPS	LPDS	C14-481 AC POWER CB - OFF DC LOGIC A PWR CB - OPEN DC LOGIC B PWR CB - OPEN	
		10-169	MEPS	SFET	C14-268 DTCS CONSOLE PWR ON CB - OPEN VERIFY PWR LITE OFF C14-484 EXT. SIG. COND. UNIT AM-1 SW - OFF VERIFY AC LITE OFF	
		10-170	MEPS	SFET	C14-240 DC PWR -12V SW - OFF DC PWR +6V SW - OFF DC PWR +12V SW - OFF DC PWR +28V SW - OFF AC PWR SW - OFF	
				SFET	-12V DC PWR LITE OFF +6 DC PWR LITE OFF +12V DC PWR LITE OFF +28V DC PWR LITE OFF AC PWR LITE OFF	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		10-170		LFET	C14-261 LINE DRIVER CB1 - OFF	
				UFET	C14-232 DATA INTERLEVEL DC PWR SW - OFF	
					C14-267 EXT - DTCS M1 DC PWR - OFF C34-707-101 AC PWR SW - OFF	
				LPDS	AC POWER ON LITE OFF DC LOGIC A + B LITES OFF	
		10-171 MEPS		SFET	C14-590 PANEL PWR SW - OFF MAIN PWR CB1 - OFF	
				LPDS	A14-052 DC PWR SUPPLY PANEL AC INPUT SW - OFF POWER CONTROL PANEL 120/208 VAC CB'S - OFF 28 VDC CB - OFF	
					A14-074 MAIN POWER 28 VDC SW - OFF MAIN POWER 115 VAC SW - OFF	
		10-172 MEPS		MQLD	STOP GSE FM/FM MAGNETIC TAPE RECORDING.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		11-000			RECYCLE FROM CDDT	
		11-001	MSTC	SCDR	PANEL 8	
					SECS	
					PYRO ARM A SW - SAFE	008S010
					PYRO ARM B SW - SAFE	008S014
					LOGIC 1 SW - OFF	008S011
					LOGIC 2 SW - OFF	008S015
		11-002	MSTC	MSEQ	VERIFY PYRO AND LOGIC BUSSES SAFE	
		11-003	MSTC	SCDR	PANEL 7	
					TVC SERVO PWR 1 SW - OFF	
					TVC SERVO PWR 2 SW - OFF	
					EDS PWR SW - OFF	007S001
			MSEQ		EDS VOTE 1 OUT LITE OFF	CD0132
					EDS VOTE 2 OUT LITE OFF	CD0133
					EDS VOTE 3 OUT LITE OFF	CD0134
		11-004	MSTC	SCDR	PANEL 325	
					GLY TO RAD PRIM VLV - (PUSH, NORMAL)	
		11-005	MSTC	MECE	ECS SOV - ON	KF7090 R023 KF7097 R027
					ECS BYPASS - OFF	KF7011 R025 KF7010 R021
		11-006	MSTC	SLMP	PANEL 3	
					TAPE RCDR FWD SW - OFF (TAPE MOTION TB B/P)	003S051
					FC REACS VLV SW - NORM	003S076
		11-007	MSTC	MEPE	PS 2, 3, 4, 7, 8 LOCKOUT - OFF	KC7703 C076
			MEPE		22 0213 3440 IS INSERTED	
			MEPE		PS 2, 3, 4, 7, 8 LOCKOUT ON LITE OFF	GC5137

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		11-008	MSTC	SLMP	PANEL 5	
					MN BUS TIE BAT A/C SW - OFF	005S004
					BAT B/C SW - OFF	005S005
				MEPS	ENTRY BATS OFF MAIN BUSSES	
		11-009	MSTC	MACE	R112 - 0000 RECONFIGURE DECOMMS FOR 204.8 AND 51.2 HARDLINE	
		11-010	MSTC	CSTO	PUT CH 214 ON UMBILICAL AND VHF	
		11-011	MSTC	SCDR SLMP	PANEL 9, 6 PAD COMM SW - T/R	
		11-012	MSTC	HFLT	EXECUTE ACE G AND N UPLINK ENABLE (RTC 11, 15)	
			MCSE		VERIFY UDL VALIDITY SIGNALS (2)	
		11-013	MSTC	SLMP	PANEL 3	
					UP TLM CMD SW - OFF	003S039
+00 15		11-014	MSTC	CVTS	1. CSM PYRO AND LOGIC BUSSES ARE SAFE.	
					2. EDS POWER IS OFF	
					3. CSM READY FOR RF COMPATIBILITY TEST ON CH 121.	
					4. CSM CMD DECODER IS OFF	
		11-015	CLTC	MSTC	VERIFY READY FOR GMIL CSM S-BAND CARRIER OFF.	
		11-016	CLTC	MSTC	CSM S-BAND XPNDR - OFF	
		11-017	MSTC	SLMP	PANEL 3	
					S BAND NORM PWR AMPL HI SW - OFF	003S032
					XPNDR SW - OFF	003S029
				SLMP	S-BAND PA TB - B/P	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		11-018	MSTC	SCDR	PANEL 2 UP TLM CM SW - ACCEPT	
		11-019	MSTC	CVTS	VERIFY CONTROL AREA OPEN FOR CREW EGRESS AND CSM SECURING.	
		11-020	MSTC	SPAD	1. RETURN TO SA-9 FOR HATCH OPENING, CREW EGRESS AND CSM SECURING. REPORT WHEN ON STATION. 2. PROTECTIVE CLOTHING REQUIRED FOR CLOSEOUT CREW. 'REF. SECT. 1, PARA 5.6'	
					NOTE FOLLOWING SC PERSONNEL REQUIRED FOR CREW EGRESS AND CSM SECURING.. SA-9 / PAD APRON SPAD / VAN DRIVER SCMT / VAN ESCORT BSCMP / PVSI BSLMP / UGTR SGQC / UGCU SUIT TECH	
		11-021	SPAD	MSTC	1. CLOSEOUT CREW ON STATION. 2. 1 RESUSCITATOR FROM ML RESCUE LOCKER AND 1 EEAP FROM HOLDER POSITIONED ON W/R HOOD TO RIGHT OF CM HATCH.	
		11-022	MSTC	SPAD	1. RE-INSTALL ENVIRONMENTAL CHAMBER PANELS. REPORT COMPLETION. 2. VERIFY POVS AVAILABLE FOR FLIGHT CREW.	--- NASA QC
		11-023	SPAD	MSTC	E/C PANELS INSTALLED.	
		11-024	MSTC	SLMP	BPC HATCH RELEASE SEL - AWAY FROM BPC JETT.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		11-025	MSTC	SPAD	1. OPEN BPC HATCH AND CM HATCH PER T/S 8.2.6.2.6. REPORT COMPLETION.	------- NASA QC
		11-026	MSTC	SCDR SLMP	VERIFY/LOCK HAND CONTROLLERS AND STOW (2 EA) ARM RESTS	
		11-027	MSTC	SCDR	PANEL 380	
					SUIT RET AIR VLV - PULL OPEN	
		11-028	MSTC	SCDR SCMP SLMP	REMOVE GLOVES AND THEN HELMETS AND PASS FROM CM	
		11-029	MSTC	SCDR	PANEL 7	
					DIRECT 02 VLV - CLOSE (CW)	
		11-030	MSTC	SCMP	PANEL 2	
					SUIT CKT H20 ACCUM AUTO SW - CENTER	
					CABIN FAN	
					1 SW - OFF 002S029	
					2 SW - OFF 002S030	
				MECE	TIME ----------	
		11-031	MSTC	SLMP	PANEL 3	
					VHF AM B SW - OFF	
		11-032	MSTC	GMIL	RELEASE VHF UPLINK 'CONSTANT KEY'	
		11-033	MSTC	SLMP	PANEL 4	
					SUIT COMPR	
					2 SW - OFF 004S007	
					1 SW - OFF 004S006	
				MECS	TIME ----------	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		11-034	MSTC	SCDR SCMP SLMP	DISCONNECT COU FROM PGA. OBTAIN SUIT CIRCUIT INTERCONNECT FROM SPAD AND CONNECT SUPPLY AND RETURN NOZZLES OF COU TOGETHER.	
		11-035	MSTC	SLMP	PANEL 6	
					SUIT PWR Sw - OFF	006S007
					PWR SW - OFF	006S006
		11-036	MSTC	SCDR	PANEL 9	
					SUIT PWR SW - OFF	009S007
					PWR SW - OFF	009S006
		11-037	MSTC	SCMP	PANEL 10	
					SUIT PWR SW - OFF	010S007
					PWR SW - OFF	010S006
		11-038	MSTC	SPAD	CONTINUE EGRESS	
		11-039	SPAD	SCDR SCMP SLMP	DISCONNECT CCU FROM PGA.	
		11-040	SPAD	SCMP	EGRESS FROM CM AND CONNECT POV TO PGA IF DESIRED RECORD _____ TIME	
		11-041	SPAD	SLMP	EGRESS FROM CM AND CONNECT POV TO PGA IF DESIRED RECORD _____ TIME	
		11-042	SPAD	SCDR	EGRESS FROM CM AND CONNECT POV TO PGA IF DESIRED. RECORD _____ TIME	
		11-043	SPAD	MSTC	CREW EGRESS COMPLETE	
		11-044	MSTC	SSSA	RETURN CREW TO [illegible].	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		11-045	MSTC	CVTS	1. FLIGHT CREW EGRESS IS COMPLETE.	
					2. TERMINATE VIDEO RECORDING.	
					3. SC RF IS OFF.	*1
					NOTE	
					REMAINING REFERENCES TO SCDR, SCMP AND SLMP ARE FOR CSM TECHNICIANS.	
		11-046	MTPE	SCDR SCMP SLMP	INGRESS CM (SCMP TO LEB)	
		11-047	MTPE	SPAD	1. REINSTALL PYRO ARM SW GUARD 2. RECONFIGURE PTC HEATER CABLE 3. RETURN 1 EEAP TO HOLDER IN W/R AND 1 RESUSCITATOR TO ML RESCUE LOCKER. REPORT COMPLETION.	NASA QC *
		11-048	MSTC	CVTS	SPAD HAS PYRO ARM SW GUARD KEY.	
		11-049	MTPE	SCDR	PANEL 2	
					RCS CMD SW - OFF, REL 002S043	
					PANEL 8	
					AUTO RCS SELECT	
					A/C ROLL	
					A1 SW - OFF 008S017	
					C1 SW - OFF 008S018	
					A2 SW - OFF 008S019	
					C2 SW - OFF 008S020	
					B/D ROLL	
					B1 SW - OFF 008S021	
					D1 SW - OFF 008S022	
					B2 SW - OFF 008S023	
					D2 SW - OFF 008S024	
					PITCH	
					A3 SW - OFF 008S025	
					C3 SW - OFF 008S026	
					A4 SW - OFF 008S027	
					C4 SW - OFF 008S028	
					YAW	
					B3 SW - OFF 008S029	
					D3 SW - OFF 008S030	
					B4 SW - OFF 008S031	
					D4 SW - OFF 008S032	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		11-050	MTPE	SCDR	PANEL 1	
					EMS FUNCTION SEL - OFF	
					EMS MODE SW - STBY	
					CMC ATT SW - IMU	001S002
					FDAI	
					SCALE SW - ERR 5/RATE 5	001S003
					SELECT SW - 1	001S004
					SOURCE SW - GDC	001S005
					ATT SET SW - GDC	001S006
					MAN ATT	
					ROLL SW - RATE CMD	001S007
					PITCH SW - RATE CMD	001S008
					YAW SW - RATE CMD	001S009
					LIMIT CYCLE SW - OFF	001S010
					ATT DEADBAND SW - MIN	001S011
					RATE SW - LOW	001S012
					TRANS CONTR PWR SW - OFF	001S066
					ROT CONTR PWR	
					NORM 1 SW - OFF	001S064
					NORM 2 SW - OFF	001S065
					DIRECT 1 SW - OFF	001S013
					DIRECT 2 SW - OFF	001S067
					SC CONT SW - SCS	001S018
					BMAG MODE	
					ROLL SW - RATE 2	001S020
					PITCH SW - RATE 2	001S021
					YAW SW - RATE 2	001S022
					SPS THRUST SW - NORMAL	001S023
					DV THRUST	
					A SW - OFF (GUARDED)	001S020
					B SW - OFF (GUARDED)	001S059
					SCS TVC	
					PITCH SW - AUTO	001S038
					YAW SW - AUTO	001S039

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		11-050			SPS GMBL MOT		
					PITCH 1 SW -OFF	001S040	
					PITCH 2 SW - OFF	001S041	
					YAW 1 SW - OFF	001S042	
					YAW 2 SW - OFF	001S043	
					DV CG SW - CSM	001S054	
					ENTRY		
					EMS ROLL SW - OFF	001S050	
					.05 G SW - OFF	001S051	
					LV/SPS IND S-II/S-IVB SW - GPI	001S053	
					TVC GMBL DR		
					PITCH SW - 1	001S027	
					YAW SW - 1	001S028	
		11-051	MTPE	SCDR	PANEL 7		
					FDAI/GPI PWR SEL - OFF	007S003	
					BMAG PWR		
					1 SEL - OFF	007S006	
					2 SEL - OFF	007S007	
			MSCR		RECORD TIME, TABLE 5		
			MSCL		GYRO 1 SMRD LITE - ON	CH3623	
					GYRO 2 SMRD LITE - ON	CH3624	
		11-052	MTPE	SCDR	PANEL 7		
					SCS		
					TVC SERVO PWR		
					1 SW - OFF	007S008	
					2 SW - OFF	007S009	
					ELEC PWR SEL - OFF	007S005	
					LOGIC PWR 2/3 SW - OFF	007S010	
					SIG COND/DR BIAS PWR		
					1 SW - OFF	007S011	
					2 SW - OFF	007S012	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		11-053	MTPE	SCDR	PANEL 8	
					SCS	
					TVC AC 1 CB - OPEN	008C055
					AC 1 CB - OPEN	008C009
					AC 2 CB - OPEN	008C010
					ECA/TVC AC2 CB - OPEN	008C054
					DIRECT ULL	
					MNA CB - OPEN (GUARDED)	008C072
					MNB CB - OPEN (GUARDED)	008C073
					CONTR/DIRECT	
					1 MNA CB - OPEN	008C013
					1 MNB CB - OPEN	008C014
					2 MNA CB - OPEN	008C070
					2 MNB CB - OPEN	008C071
					A/C ROLL	
					MNA CB - OPEN	008C015
					MNB CB - OPEN	008C016
					B/D ROLL	
					MNA CB - OPEN	008C017
					MNB CB - OPEN	008C018
					PITCH	
					MNA CB - OPEN	008C019
					MNB CB - OPEN	008C020
					YAW	
					MNA CB - OPEN	008C021
					MNB CB - OPEN	008C022
					ORDEAL	
					AC 2 CB - OPEN	008C065
					MNB CB - OPEN	008C064
					SCS	
					CONTR/AUTO	
					MNA CB - OPEN	008C074
					MNB CB - OPEN	008C075
					LOGIC BUS	
					1/2 MNA CB - OPEN	008C063
					3/4 MNA CB - OPEN	008C023
					1/4 MNB CB - OPEN	008C062
					2/3 MNB CB - OPEN	008C024
					SYS	
					MNA CB - OPEN	008C011
					MNB CB - OPEN	008C012
					RCS SM HTRS	
					A MN B CB - OPEN	
					C MN B CB - OPEN	
					B MN A CB - OPEN	
					D MN A CB - OPEN	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		11-053			RCS LOGIC	
					MNA CB - OPEN	008C043
					MNB CB - OPEN	008C044
					EMS	
					MNA CB - OPEN	008C052
					MNB CB - OPEN	008C053
					SPS	
					PITCH 1 BAT A CB - OPEN	008C031
					PITCH 2 BAT B CB - OPEN	008C032
					YAW 1 BAT A CB - OPEN	008C033
					YAW 2 BAT B CB - OPEN	008C034
		11-054	MTPE	MGNS	PROCEED WITH G+N DEACTIVATION	
		11-055	MGNS	MGNR	K148 INSERT	
					V36	
					E	
					WAIT 10 SECONDS	
					V41N20	
					E	
					+00000	
					E	
					+00000	
					E	
					+09000	
					E	
					* WAIT 15 SEC *	
			MGNL		NO ATT LITE ON	ZG8094
					GIMBAL LOCK LITE ON	ZG8035
					CDU ANGLES	
					'P5-14'	
					X/OG DEG	0 +/- 3
					Y/IG DEG	0 +/- 3
					Z/MG DEG	+90 +/- 3

NOTE

VERIFY CDU ANGLES ARE WITHIN '1' DEG OF DESIRED. IF NOT,

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		11-055			REPEAT PREV. SEQ.	
		11-056	MGNS	SCMP	PANEL 100 G+N POWER IMU - OFF	100S002
			MGNL		TIME ----------	
					IMU HEATER POWER MUST BE OFF LESS THAN 15 MIN. TO PREVENT POSSIBLE DAMAGE TO THE IMU.	
		11-057	MGNS	SCMP	VERIFY PTC CABLE CONNECTED TO PSA 45J2	------ NASA QC
					CAUTION DO NOT PROCEED UNTIL PTC CABLE CONNECTED	
					NOTE IF PTC CABLE IS NOT CONNECTED, RECONFIGURE AS FOLLOWS..	
		11-058	MGNR	UFET	VERIFY PTC POWER OFF	
		11-059	MGNS	SCMP	REMOVE DUST COVER FROM PSA 45J2 CONNECT W001C TO PSA 45J2	------ NASA QC
		11-060	MGNS	UFET	NOTIFY AFET PTC POWER IS COMING ON.	
					PTC POWER SW - ON RESET ALARMS AS REQUIRED	
					--- END OF RECONFIGURATION ---	
		11-061	MGNS	SLMP	PANEL 5	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		11-061			G+N IMU MNA - OPEN 005C056 MNB - OPEN 005C057 IMU HTR MNA - OPEN 005C058 MNB - OPEN 005C059	
			MGNL		TIME ----------	
		11-062	MGNS	UFET	VERIFY AN OPERATING PTC	
		11-063	MTNS	MGNR	K148 INSERT V23N20 E 0 E	
			MGNL		GIMBAL LOCK LITE OFF	ZG8035
		11-064	MGNS	MGNR	K148 INSERT (FRESH START) V21N01 E 1036 E 40000 E	
		11-065	MGNL		NO ATT LITE OFF	
		11-066	MGNS	MTPE	CMC DEACTIVATION WILL CAUSE MASTER ALARM AND MAY CAUSE LOS.	
		11-067	MGNS	SLMP	PANEL 5 G+N COMPUTER MNA CB - OPEN 005C060 MNB CB - OPEN 005C061	
			MGNL		TIME ----------	
		11-068	MGNS	SLMP	PANEL 5 G+N POWER SW - OFF 005S012 AC1 CB - OPEN 005C054 AC2 CB - OPEN 005C055	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		11-068			OPTICS MNA CB - OPEN 005C062 MNB CB - OPEN 005C063	
		11-069	MGNS	MTPE	G+N POWER DOWN COMPLETED.	
		11-070	MTPE	SNQC SGQC	PROCEED WITH POST CREW EGRESS INSPECT PER T/S 8.2.6.3.1. REPORT COMPLETION. ------ NR QC ------- NASA QC	
		11-071			NOTE WAIT FOR MSS TO BE POSITIONED	
		11-072	MTPE	SPAD	1. PROCEED WITH TEST SETUP 8.2.7.1 THRU 8.2.7.6.5. EXCEPT DO NOT PERFORM 8.2.7.3.4 AND 8.2.7.3.8. AND 8.2.7.6.5.	*1
					2. REPORT WHEN COMPLETE. ----- NR QC ------- NASA QC	
					NOTE FOLLOWING TIMES IN HOURS AND MINUTES.	
		11-072A	MTPE	CTSC	PROVIDE SCAPE AND SPLASH SUPPORT (4x4) FOR HYPERGOLIC RECONNECT AT T+07 00.	1
		11-073	MTPE	MECS	SWITCH GSE TO LOCAL.	
		11-074	MTPE	SPAD SLFC	PROCEED WITH CRYO GSE RECONNECT PER TCP-K-10027B, PARA. 2.17 AND 2.18	
		11-075	MTPE	MSPS	PROCEED WITH S/C HELIUM PANEL PURGE LINE CONNECTION PER SEQUENCE 12V2.	
		11-076	MTPE	PFTR POTR	VERIFY READY FOR STUB TOWER HYPERGOLIC LINE CONNECTION IN SCAPE.	
					CONNECT CREW --- PFTR '2' POTR '2' PNQC '1' PNQC '1'	
					ROVING --- PVSS SNRS	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
+07 00		11-077	MSTC	CVTS	CLEAR AREA WITHIN 50 FT. RADIUS OF MSS FUEL AND OXIDIZER STUB TOWERS FOR HYPERGOLIC LINE RECONNECT. VERIFY CPSS CLEARANCE TO PROCEED WITH SCAPE OPERATION.	
					WARNING --- INGRESS/EGRESS FOR LV/SC SPACES WILL BE UPWIND OF SCAPE/SPLASH OPERATION.	
		11-078	MTPE	MSPS	1. PROCEED WITH HYPER LINE RECONNECT PER SEQ. 12V2. 2. RECONNECT C14-352 CABLING PER T/S 8.2.7.6.7 REPORT COMPLETION ----- NR QC ----- NASA QC	
		11-079			DELETED	*1
		11-080			DELETED	*1

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
+09 30		11-081	MSPS	MTPE	HYPER LINE CONNECTIONS COMPLETE	
		11-082	MSTC	CVTS	1. HYPERGOLIC LINE CONNECTION COMPLETE 2. VERIFY DISC TOWER OPEN FOR NORMAL WORK.	
+09 45		11-082A	CVTS	MSTC	RECONFIGURE SA-8 ECS DUCT TO TEST CONFIG.	*1
		11-082B	MTPE	SPAD	PERFORM T/S 8.2.7.6.5 (SA-8 DUCT RECONFIG)	*1
		11-082C	KSTC	MSTC	HAVE SPAD PREPARE TO SUPPORT SLA PENETRATION OPENING AND SLA CUTTER INSTL.	*1
		11-082D	MTPE	SPAD	STANDBY TO SUPPORT SLA PENETRATION OPENING AND SLA CUTTER INSTL.	*1
+11 00		11-083	MTPE	SPAD MLFC	1. CONNECT STUB TOWER CRYO LINES PER K-10027. 2. COORDINATE WITH MLFC FOR REINSTALLATION OF GH2, GO2, GN2, + GH2 K-BOTTLES FOR CRYO SERVICING. 3. REPORT COMPLETION. ----- NR QC	
					NOTE WAIT FOR COMPLETION OF MSS CABLING BEFORE PROCEEDING.	
		11-084	SPAD	MTPE	MSS RECABLE COMPLETE.	
		11-085	MTPE	SNQC	REPORT VERIFICATION OF MSS RECABLE. ----- NR QC	
		11-086	MTPE	MEPS	POWER UP MSS. MSS POWER UP	
		11-087	MEPS	CSGS	MSS ACE PS INPUT - ON	
			CSGS		ACTIVATE LITE ON	
			SPDS		C14-626 (PS1) AC INPUT ON LITE ON	
		11-088	MEPS	CSGS	MSS ACE PS OUTPUT -ON	
			CSGS		ACTIVATE LITE ON	
			SPDS		C14-626 (PS DC OUTP LITE ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		11-089	MEPS	CSGS	MSS ACE PS BAT ENABLE - ON ACTIVATED LITE ON	
		11-090	MEPS	CSGS	MSS CSM ACE BUS - ON	
					MSS LM ACE BUS - ON	
			CSGS		ACTIVATE LITE ON	
			SPDS		C14-628 (PS1) FEEDER BUS B ON LITE ON	
		11-091	MEPS	SFET	C14-240 CONSOLE PWR CONTROL AC PWR SW - ON	
			SFET		PWR ON LITE ON	
		11-092	MEPS	SFET	DC PWR +28 VDC SW - ON	
			SFET		+28 VDC PWR ON LITE ON VOLTAGE VDC -----	28 +/- 1 VDC
		11-093	MEPS	SFET	DC PWR +12V SW - ON	
			SFET		+12V PWR ON LITE ON VOLTAGE VDC -----	12 +/- 1 VDC
		11-094	MEPS	SFET	DC PWR +6V SW - ON	
			SFET		+6V PWR ON LITE ON VOLTAGE VDC -----	6 +/- 1 VDC
		11-095	MEPS	SFET	DC PWR -12V SW - ON	
			SFET		-12V PWR ON LITE ON VOLTAGE VDC ----- BLOWER IS OPERATING	-12 +/- 1 VDC

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		11-096	MEPS	SFET	C14-484	
					GND SW - ACE/STU PRIME PWR SW - AC AC SW - ON VERIFY AC LITE ON VERIFY BLOWER OPERATING AM-1 SW - ON VERIFY AM-1 LITE ON AM-2 SW - OFF AM-3 SW - OFF EM-1 SW - OFF	
		11-097	MEPS	SFET	C14-268	
					PWR SW - ON	
		11-098	MEPS	MACE	EXECUTE THE FOLLOWING INSERT	
					D C B A R114 1 0 1 0	
			MACE		SYNC ACQUIRED	
					VERIFY GO CONDITION OF STANDARDS	
			MEPE		PS 1 OUTPUT LITE ON	GC5138
					GSE BUS PS 1 OUTPUT IS 29 +1 VDC (P2-23)	GC5149
		11-099	MEPS		P/S 5 AC START (R094) - ON	KC7709
			SPUS		C14-626 P/S 5 AC INPUT POWER ON LITE ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		11-100	MEPS		P/S 5 DC ON (R094) - ON	KC 7710
			SPDS		C14-626 P/S 5 DC OUTPUT POWER ON LITE ON	
			MEPE		P/S 5 OUTPUT LITE ON	GC 5143
					P/S 5 OUTPUT VDC INDICATES 31 +/- 1 (M)	GC 5146
					GSE BUS P/S 5 IS 31 +/- 1 VDC (P2-23)	GC 5150
					P/S 5 BAT EN LITE OFF	GC 5145
					P/S 5 BAT ON LITE OFF	GC 5144
		11-101	MEPS	MEPE	FEEDER BUS B (C076) - ON	KC 4713
			MEPE		220 3234 321 IS INSERTED	
			MEPE		P/S 5 GSE BUS B ON LITE ON	GC 5147
			SPDS		C14-628 P/S 5 FEEDER BUS B ON LITE ON	
		11-102	MEPS	MEPE	FEEDER BUS C (C076) - ON	KC 7714
			MEPE		220 3234 331 IS INSERTED	
			MEPE		P/S 5 GSE BUS C ON LITE ON	GC 5148
			SPDS		C14-628 P/S 5 FEEDER BUS C ON LITE ON	
		11-103	MEPS		P/S 5 BATT ENABLE (R094) - ON	KC 7711
			MEPE		P/S 5 BAT EN LITE ON	GC 5145
			SPDS		C14-628 P/S 5 BATTERY ON LITE ON	
		11-103A	MSTC	KSTC	P.S. 1 AND 5 ARE AVAILABLE.	*1
		11-104	MTPE	SLMP	PANEL 4 ECS GLY PUMP SEL - OFF TIME -----	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMAR
		11-105	MTPE	SCDR	PANEL 326 SM 02 SUPPLY - OFF 02 REPRESS PKG VLV - FILL 02 SURGE TK VLV - ON PANEL 601 LIFT COVER ALTERNATELY OPEN AND CLOSE REPRESS 02 VLV TO BLEED EMER 02 SYS TO AMBIENT +50 PSI AS INDICATED ON EMER 02 GAGE (PANEL 602)	
		11-106	MTPE	SPAD	HAVE FOLLOWING STATIONS PERFORM PLACARDS. REPORT COMPLETION ON F/C CHANNEL 224. SOMD SLOT SHFD SLHT SLOM PLHM SLHM PLOM	
+11 15		11-106A	MTPE	SPAD	VERIFY T/S 8.2.7.6.5 COMPLETE. ------ NR QC ------- NASA QC *1	
+11 45		11-107	SPAD	MTPE	SILO 4 CLOSED AND OPERATIONAL	
+18 00		11-108	MTPE	SLFC	START F/C ENGR WALKDOWN REPORT COMPLETION	
+19 00		11-109	MTPE	MLFC	PROCEED WITH GSE PWR UP PER SEQ 31V2	
+20 00		11-110	MLFC	MTPE	GSE PWR UP COMPL.	
		11-111	SLFC	MTPE	ENGR WALKDOWN COMPL.	
		11-112	MLFC	MTPE	PROCEEDING WITH F/C AND CRYO FDS LEAK CHECK	
+23 00		11-113	MLFC	MTPE	LK CK COMPLETE. PROCEEDING WITH GSE PURGING	
		11-114	MLFC	MTPE	REQUEST CONCURRENCE TO FLOW GO2 AND GH2	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		11-115	MSTC	CVTS	VERIFY CLEARANCE TO FLOW GO2/GH2	
		11-116	MTPE	MLFC	PROCEED WITH GO2 AND GH2 PURGING	
+24 00		11-117	MSTC	CTSC	1. PROVIDE GO2 AND GH2 SAMPLE BOTTLES ON 4A IN 30 MIN. SAMPLES WILL BE DRAWN IN 1.5 HOURS. 2. PROVIDE MOISTURE SAMPLING EQUIP. ON 4A IN 30 MIN. MEASUREMENTS WILL BE MADE IN 2 HOURS.	
+26 00		11-118	MLFC	MTPE	F/C AND CRYO LEAK CK AND PURGE CMP. PROCEEDING WITH LO2 DETANK AND FAN CKS TK NO. 2. PERSONNEL WILL STAND CLEAR OF VENT DURING DETANK	
+27 00		11-119	MLFC	MTPE	O2 DETANK AND FAN CKS COMPL. PROCEEDING WITH POD LK CKS	
+29 00		11-120	MLFC	MTPE	POD LEAK CKS COMPL. PROCEEDING WITH GSE POWER DOWN	
+30 00		11-121	MLFC	MTPE	GSE POWER DOWN COMPLETE. PERSONNEL ON COMMAND CHANNEL.	
		11-122	MTPE	PFRS	S14-060 (FUEL TVD) CB 1 - CLOSE (AFTER 1 MIN, VERIFY UNIT READY LITE ON)	
		11-123	MTPE	PORS	S14-061 (OXID TVD) CB 1 - CLOSE (AFTER 1 MIN, VERIFY UNIT READY LITE ON)	
		11-124	MTPE	MLFC MECS	PERFORM O2 PRESS PER SEQ 06 V2.	
		11-125	MTPE	MEPS	PROCEED WITH SC POWER DOWN	
		11-126	MEPS	ALL	STANDBY FOR MOMENTARY LOS	
		11-127	MEPS	MACE	GO TO INTERNAL TIMING. DISABLE CM A/B DATA. R112 - 1010 VERIFY SYNC	
		11-128	MEPS	SCMP	PANEL 2 STATUS C/W LITES	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		11-128			C/W PWR SW - OFF (CTR)		
		11-129	MEPS	SLMP	PANEL 5		
					C/W MNA CB - OPEN	005C052	
					C/W MNB CB - OPEN	005C053	
		11-130	MEPS	SLMP	PANEL 4		
					TELCOM GRP 1 SW - OFF	004S004	
					TELCOM GRP 2 SW - OFF	004S005	
					PANEL 5		
					INST		
					ESS MN A CB - OPEN	005C019	
					ESS MN B CB - OPEN	005C020	
			MSEQ		ELS SAFE LITES (8) - OFF	CE0310 THRU CE0317	
					PANEL 3		
					PWR SCE SW - OFF	003S052	
					INV 2 AC BUS 2 SW - OFF	003S065	
					INV 1 AC BUS 1 SW - OFF	003S060	
					INV 2 SW - OFF	003S058	
					INV 1 SW - OFF	003S057	
				MEPS	HRS MIN SEC		
		11-131	MEPS	SLMP	VERIFY AC BUS 1 AND 2 90 VAC MAX		
		11-132	MEPS	SCMP	PANEL 225		
					CTE MN A CB - OPEN	225C021	
					CTE MN B CB - OPEN	225C022	
		11-133	MEPS	UFET	C14-205		C076
					CB6 - OPEN		
				UFET	CB6 LITE OFF		
			MEPS		MTR SW PS VDC (P2-21)	GC5030	39+/-1
		11-134	MEPS	MEPE	SM MOTOR SW CLOSE - OFF	KC7636	R102
			MEPE		MTR SW OPEN LITE ON	SC2410	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		11-135	MEPS	SLMP	PANEL 3		
					VERIFY MN BUS A AND MN BUS B 20 VDC MAX		
		11-136	MEPS	MEPE	PS A TO BUS A - OFF	KC7024	R100
					PS B TO BUS B - OFF	KC7034	R101
				UFET	C14-205 CB 8 THRU 15 LITES OUT		
		11-137	MEPS	SCMP	PANEL 250		
					PYRO A SEQ A CB - OPEN	250C016	
					PYRO B SEQ B CB - OPEN	250C017	
					BAT A PWR ENTRY AND PL CB - OPEN	250C020	
					BAT B PWR ENTRY AND PL CB - OPEN	250C021	
					BAT C PWR ENTRY AND PL CB - OPEN	250C022	
					BAT C BAT CHGR AND EDS 2 CB - OPEN	250C023	
		11-138	MEPS	MSEQ	INDICATE PWR - OFF	KD7021	R084
			MSEQ		SMJC A SAFE LITE OFF	SD0352	
					SMJC B SAFE LITE OFF	SD0353	
					LOGIC BUS SAFE LITE OFF	CD0088	
					PYRO BUS SAFE LITE OFF	CD0218	
					MESC SYS A SAFE LITE OFF	CD0084	
					MESC SYS B SAFE LITE OFF	CD0085	
		11-139	MEPS	SLMP	PANEL 3		
					VERIFY ALL DC INDICATOR POSITIONS INDICATE 20 VDC MAX		
		11-140	MEPS	MTPE	SC POWER DOWN COMPLETE		
		11-141	MTPE	ALL	PROCEED WITH GSE POWER DOWN		
		11-142	MTPE	MECS	TRANSFER 400 HZ PWR SUPPLY TO LOCAL		
		11-143	MECS	CSGS	LCC ML PWR 400 HZ SW - OFF		
			CSGS		ACTIVATE LITE REMAINS ON		
		11-144	MECS	MECE	400 HZ BU PWR - OFF	KC7694	R016
		11-145	MECS	MECE	400 HZ PRI PWR - OFF	KC7693	R016
			CSGS		ACTIVATE LITE REMAINS ON		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		11-145	LPDS		LOAD PRI LITE ON PRI UNIT LOAD LITE ON		
		11-146	MECS	MTPE	400 HZ PWR SUPPLY - LOCAL SUPPLY		
		11-147	MTPE	MECS	POWER DOWN ECS GSE PER SEQ 05 V2		*1
		11-148	MECS	MTPE	ECS GSE IS POWERED DOWN		
		11-149	MTPE	MEPS	POWER DOWN GSE POWER DISTRIBUTION		
		11-150	MEPS	MEPE	BUS A FLTR ON/OFF - OFF	KC7768	R075
			MEPE		GR PWR FLTR BANK A ON LITE OFF	GC5075	
		11-151	MEPE	MEPE	BUS B FLTR ON/OFF - OFF	KC7769	R075
			MEPE		GR PWR FLTR BANK B ON LITE OFF	GC5076	
		11-152	MEPS	MEPE	PS B DC ON (R101) - OFF	KC7702	
				MEPE	GSE BUS PS B IS 0+2-0 (P1-11) PS B OUTPUT ON LITE OFF	 GC5128	 10C05
				LPDS	C14-626 P/S 4 DC OUTPUT POWER LITE OFF		
		11-153	MEPS	MEPE	PS B AC START - OFF	KC7032	R101
				MEPE	GSE BUS PS B IS 0+2-0 (P1-3)	GC5028	
				LPDS	C14-626 PS 4 AC INPUT POWER ON LITE OFF		
		11-154	MEPS	MEPE	PS A DC ON - OFF	KC7698	R101
				MEPE	GSE BUS PS A IS 0+2-1 (P1-11) PS A OUTPUT ON LITE OFF	GC5132 GC5124	 10C02
				LPDS	C14-626 PS 3 DC OUTPUT POWER ON LITE OFF		
		11-155	MEPS	MEPE	PS A AC START - OFF	KC7022	R100
				MEPE	GND PS VOLTS BUS A IS 0+2-0 (P1-3)	GC5024	
				LPDS	C14-626 PS 3 AC INPUT POWER ON LITE OFF		
		11-156	MEPS	MQLD	STOP GSE FM/FM MAGNETIC TAPE RECORDING.		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		11-157	MEPS	UFET	C34-707-101 AC PWR SW - OFF	
		11-158	MTPE	MECS	START WATER SERVICING PREPS	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		12-000			SECTION II - OPERATING PROCEDURES - LAUNCH	
-11800		12-000A	KSTC	MSTC	HAVE SPAD SUPPORT 603 SLA CUTTER REMOVAL (E).	*2
		12-000B	MTPE	SPAD	REMOVE SLA XA603 CUTTERS (E) PER T/S 8.2.9.4.6. REPORT COMPLETION. NR QC NASA QC	*2
-11600		12-001	MTPE	CTSC	VERIFY LH DEWAR FILL AND SAMPLE HAS STARTED	
-11200		12-002	MTPE	CTSC	VERIFY LH2 DEWAR FILL AND SAMPLING CMP AND STARTING LO2 FILL AND SAMPLING	
-11000		12-002A	KSTC	MSTC	HAVE SPAD SEND CREW TO REMOVE 603 QUAD 1 PLATFORM PADS & PERFORM FINAL INSPECTION. REPORT COMPLETION.	*2
		12-002B	MTPE	SPAD	IN (XA603) QUAD 1 AREA, REMOVE SLA INTERNAL PADS PER T/S 8.2.10.4.1B. & PERFORM INSPECTION PER T/S 8.2.9.4.6. REPORT COMPLETION. NR QC NASA QC	*2
-10900		12-002C	MSTC	KSTC	603 QUAD 1 PADS HAVE BEEN REMOVED AND FINAL INSPECTION COMPLETE. CLEAR TO REMOVE PLATFORMS.	
-10800		12-003	MTPE	CTSC	VERIFY LO2 FILL AND SAMPLING COMPLETE	

CALL TO STATION - PRECOUNT (LAUNCH)

-105	12-003A	KSTC MSTC	HAVE SPAD SEND CREW TO REMOVE 525 QUAD 1 PADS AND PERFORM INSPECTION. REPORT COMPLETION. *2
	12-003B	MTPE SPAD	IN (XA525) QUAD 1, REMOVE SLA INTERNAL PADS PER T/S 8.2.10.4.1B AND PERFORM INSPECTION PER T/S 8.2.9.4.6. REPORT COMPLETION. NR QC NASA QC *2
	12-004	MTPE ALL	ALL CONTROL ROOM LEAD ENGINEERS' STAND BY FOR REPORT OF INGRESS/EGRESS LOG STATUS. BE READY TO ADVISE REMOVAL OF ITEMS IN COMMAND MODULE WHICH ARE NOT COMPATIBLE WITH THIS TEST.
	12-005	MTPE SNQC SGQC	REPORT INGRESS/EGRESS LOG STATUS NR QC NASA QC
	12-006	MTPE ALL	VERIFY INGRESS/EGRESS LOG COMPATIBLE WITH TEST TO BE PERFORMED.

MECS _____

MLFC _____

MEPS _____

MSCS _____

MCSE _____

MSPS _____

MREC _____

MGNS _____

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*2

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		12-006			NOTE TEST SETUPS CONTAINED IN SECT 8.0 OF VOLUMN I AND II	
		12-007	MTPE	MACE	1. VERIFY/SLAVE COUNTDOWN CLOCK TO LCC CLOCK. 2. VERIFY TAPE RECORDERS ON.	
		12-008	MSTC	ALL	1. ALL SC STATIONS REPORT COMPLETION OF PRE-POWER SETUPS ON ASSIGNED CHANNELS AND SIDE TONE CHANNEL 222. AT COMPLETION OF REPORT ALL PERSONNEL RETURN TO CHANNEL 222. 2. DO NOT REMOVE R-START FUNCTIONS	
	222	12-009	MTPE		RECORD SETUP COMPLETION REPORTS.. MACE REPORTS FOR ACE RACE MECS REPORTS FOR MECE UGCU UGTR UWGR MLFC REPORTS FOR MHFC SOMD MEPS REPORTS FOR MSEQ LPDS MEPE SPDS MSCS REPORTS FOR MSCL MSCR MSPS REPORTS FOR MSPE PFRS PORS MREC REPORTS FOR MQLD MPUG MGNS REPORTS FOR MGNL MGNR MCSE REPORTS FOR MOLC MUDL MCRF SPAD REPORTS FOR SFMT SFET UFET SSMT SCDR SLMP LFET SCMP SCET	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		12-009			SPAD ALSO VERIFIES COMPLETION OF TCP-K-10026, 0007 PRECOUNT COLUMN AND VOL II SETUP SHEET 8.2.1.	
					CSGS -----	
					NOTE THE SETUPS REQUIRED UNDER THE STATIONS ABOVE ARE CONTAINED IN SECT. 8, V2.	
		12-010	MSTC	MNQC MGQC	1. REPORT FOR SNQC/SGQC.	
					2. REPORT CONSTRAINTS LIST STATUS. ------ NR QC ------- NASA QC	
					3. VERIFY COMPLETION OF SETUP SHEET NO. 8.32.3 V2 ------ NR QC ------ NASA QC	
		12-011	MSTC	CVTS	1. VERIFY CLEARANCE TO START TEST. 2. POWER WILL BE APPLIED TO THE SPACECRAFT IN APPROX 30 MIN. 3. VERIFY SMDPS IS IN 2 SW/1 VLV MODE. 4. HAVE OTV CAMERA 25 TURNED ON AND PATCHED TO MSOB CONTROL ROOM MONITORS 1, 4, 7, 10. 5. VERIFY MSS AIR COND THERMOSTAT SET AT 70 DEG F. 6. VERIFY SLA/LM AIR AND GN2 PURGE TEMP CONTROLS SET AT 67 DEG F.	*1
-10400		12-012	MSTC	CVTS	HAVE SC ORDNANCE DELIVERED TO LEVEL 4A BY T-88 30.	
		12-013	MTPE	SPAD	VERIFY COMPLETION OF T/S 8.2.8.3.1. ------ NR QC ------- NASA QC	
		12-013A	MSTC	KSTC	525 QUAD 1 PADS HAVE BEEN REMOVED AND FINAL INSPECTION COMPLETE. CLEAR TO REMOVE PLATFORMS.	*2

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		13-000			GSE POWER UP - PRECOUNT (LAUNCH)	
-10400		13-001	MTPE	MECS	ACTIVATE ECS W/G GSE PER SEQ 06, V2	
		13-002	MTPE	MEPS	ACTIVATE GSE POWER SUPPLIES AND DISTRIBUTION SYSTEM.	
		13-003	MEPS	MQLD	VERIFY GSE FM/FM SIGNAL IS BEING RECEIVED. START GSE FM/FM MAGNETIC TAPE RECORDER.	
		13-004	MEPS	LPDS	C14-628 (PS 2) BATT. ON LITE ON FEEDER BUS B LITE ON	
					C14-628 (PS 8) BATT. ON LITE ON FEEDER BUS B AND C LITES ON	
		13-005	MEPS	UFET	C14-205 CB2 AND 19 LITES ON CB1 AND 18 OFF	
				UFET	C14-267 (UNITS 1 AND 2).. POWER ON LITE ON	
				UFET	C14-232 ELAPSED TIME METER RUNNING	
				LFET	C14-346 RACK C14-261 LITE ON (THRU WINDOW)	
				SFET	C14-268 POWER ON LITE ON	
		13-006	MEPS	ALL	DOWNLINK IS COMING ON	
		13-007	MEPS	MACE	EXECUTE THE FOLLOWING R-START INSERTS..	

		D	C	B	A
1.	R112	1	0	1	0
2.	R113	1	1	1	1
3.	R114	1	0	1	0
4.	R115	0	0	0	1

MACE SYNC ACQUIRED.

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		13-008	MEPS	MEPE	PS 2 OUTPUT ON LITE ON	GC5110	
					PS 2 GSE BUS ----- VDC (P2-22)	GC5132	32+/-1
					PS 2 OUTPUT ----- VDC (P2-15)	GC5114	
					PS 2 BAT ENABLE LITE ON	GC5112	
					PS 8 OUTPUT ON LITE ON	GC5116	
					PS 8 GSE BUS B ON LITE ON	GC5121	
					PS 8 GSE BUS C ON LITE ON	GC5160	
					GSE BUS PS 8 ----- VDC (P2-22)	GC5134	31+/-1
					PS 8 BAT EN LITE ON	GC5118	
		13-009	MEPS	MSEQ	VERIFY RCS CONTROL SAFE LITE ON	CD0270	
		13-010	MEPS		PS 2 REMOTE SENSE - ON	KC7737	R088
				LPDS	C14-628 (PS 2) REMOTE/LOCAL SENSING SW - LOCAL		
		13-011	MEPS		PS 2 BAT ENABLE - ON	KC7682	R071
		13-012	MEPS	LPDS	C14-481 DC LOGIC A PWR ON LITE ON DC LOGIC B PWR ON LITE ON AC POWER ON LITE ON BLOWER OPERATION HEAT SINK NO. 1 FAN OFF LITE OFF HEAT SINK NO. 2 FAN OFF LITE OFF		
		13-013	MEPS		HEAT SINK NO. 1 FAN OFF LITE OFF	GC5026	
					HEAT SINK NO. 2 FAN OFF LITE OFF	GC5027	
		13-014	MEPS	MACE	INSERT LOAD 2 7-10000201		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		13-015	MEPS	MACE	1. INSERT DTCS SURVEILLANCE ROUTINE (500 LOC) 7- +000 1002		C124
					2. ACTIVATE DTCS SURVEILLANCE 0856 33 0010 5103		C124
				MACE	VERIFY GO CONDITION OF DTCS AND STANDARDS.		
		13-016	MEPS	MEPE	ADJUST PS A OUTPUT TO 30.0 VDC		C076
			MEPE		30 0000 1300 IS INSERTED		
		13-017	MEPS	MEPE	ADJUST PS B OUTPUT TO 30.0 VDC		C076
			MEPE		30 0000 2300 IS INSERTED		
		13-018	MEPS	MEPE	PS A AC START - ON	KC7022	R100
			LPDS		PS 3 AC INPUT LITE ON		
			MEPE		S/M MTR SW OPEN LITE ON	SC2410	10C08
		13-019	MEPS	MEPE	PS A DC ON - ON	KC7698	R100
					GND P/S A VDC (P1-3)	GC5024	29+/-2
			MEPS		PS A OUTPUT ON LITE ON	GC5124	
			LPDS		PS 3 DC POWER OUTPUT ON LITE ON		
		13-020	MEPS	MEPE	BUS A FLT ON - ON	KC7768	R075
			MEPE		GND PWR FLT BANK A ON LITE ON	GC5075	
		13-021	MEPS	MEPE	PS B AC START - ON	KC7032	R101
			LPDS		PS 4 AC POWER INPUT ON LITE ON		
		13-022	MEPS	MEPE	PS B DC ON - ON	KC7702	R101
			MEPE		PS B OUTPUT ON LITE ON	GC5128	
					GND PS B VDC (P1-3)	GC5028	29+/-2
			LPDS		PS 4 DC POWER OUTPUT ON LITE ON		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		13-023	MEPS	MEPE	BUS B FLT ON - ON	KC7769 R075
			MEPS		GND PWR FLT BANK B ON LITE ON	GC5076
		13-024	MEPS	SPDS	C14-626 (PS 1) AC INPUT POWER ON LITE ON DC OUTPUT POWER ON LITE ON	
					C14-628 (PS 1) FEEDER BUS B ON LITE ON	
		13-025	MEPS		P/S 1 OUTPUT ON LITE ON	GC5138 10C22
					P/S 1 OUT VDC (P2-15)	GC5141 29+/-1
					P/S 1 BAT ENABLE LITE ON	GC5140
					P/S 1 BAT ON LITE OFF	GC5139
					GSE BUS P/S 1 (P2-23) VDC	GC5149 29+/-1
		13-026	MEPS		P/S 5 AC START - ON	KC7709 R094
			SPDS		C14-626 (PS 5) AC INPUT POWER ON LITE ON	
		13-027	MEPS		PS 5 DC ON - ON	KC7710 R094
			MEPS		P/S 5 OUTPUT ON LITE ON	GC5143
					P/S 5 OUTPUT VDC (P2-15)	GC5146 31+/-1
					GSE BUS P/S 5 (P2-23) VDC	GC5150 31+/-1
					P/S 5 BAT ON LITE OFF	GC5144
		13-028	MEPS	MEPE	FEEDER BUS B - ON	KC7713 C076
			MEPE		220 3234 321 IS INSERTED	
			SPDS		C14-628 (PS 5) FEEDER BUS B ON LITE ON	
			MEPE		P/S 5 GSE BUS B ON LITE ON	GC5147

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		13-029	MEPS	MEPE	FEEDER BUS C - ON	KC7714 C076
					220 3234 331 IS INSERTED	
			MEPE		P/S 5 GSE BUS C ON LITE ON	GC5148 10C28
		13-030	MEPS		P/S 5 BATT ENABLE - ON	KC7711 R094
			MEPE		P/S 5 BAT ENABLE LITE ON	GC5145
		13-031	MEPS	SFET	C14-590	
					1. PANEL PWR SW - ON	
					2. MAIN PWR CB1 - ON	
					3. JB5 AND JB6 - ON	
					4. GIVE TP1 THRU TP22 LITE STATUS	
					5. ALL TP'S SHOWING NO - GO LITES OR NO LITE MAY BE SWITCHED TO OVERRIDE.	
					6. VERIFY FDS GO LITE ON	
			MTPE		GSE PURGE GO LITE ON	GV0014
					GSE PURGE NO - GO LITE OFF	GV0015
		13-032	MEPS	SFMT	S14-132	
					1. J BOX NO. A5 VERIFY.. CB - CLOSED	
					2. J BOX NO. A6 VERIFY.. CB - CLOSED	
		13-033	MEPS	MTPE	GSE POWER IS UP.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		13-033			NOTE	
					PERFORM THE FOLLOWING IF REQUIRED.	
		13-033A	MSTC	KSTC	CONTROL FOR PS8 GOING FROM LOCAL TO REMOTE. HAVE KATE GO TO CH 223 FOR SUPPORT. *2	
					PS 8 LOCAL TO REMOTE	

		13-034	MTPE	LPDS	C14-626, P/S 8	A1E
					VERIFY..	
					AC INPUT POWER ON LITE ON	
					DC OUTPUT POWER ON LITE ON	
		13-035	MTPE	MEPE	VERIFY..	
					PS 8 OUTPUT ON LITE ON	GC5116 10C18
					PS 8 BAT EN LITE ON	GC5118
		13-036	MTPE	LPDS	C14-626, P/S 8	
					DC OUTPUT POWER OFF SW - ON	
				MEPE	PS 8 OUTPUT LITE OFF	GC5116 10C18
					PS 8 BAT ON LITE ON	GC5117 10C19
				LPDS	C14-626, P/S 8	
					DC OUTPUT POWER ON LITE OFF	
		13-037	MTPE	LPDS	C14-626, P/S 8	
					AC INPUT POWER STOP SW - ON	
				LPDS	C14-626, P/S 8	
					AC INPUT POWER ON LITE OFF	
		13-038	MTPE	LPDS	C14-628, (PS 8)	
					PWR SUPPLY INPUT ENABLE SW - REMOTE	
					PWR SUPPLY OUTPUT ENABLE - REMOTE	
					CONTROL SELECT SW - REMOTE	
		13-039	MTPE	MEPE	PS 8 AC START - ON	KC7686 R075
				LPDS	C14-626, P/S 8	A1E
					AC INPUT POWER ON LITE ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		13-040	MTPE	MEPE	PS 8 DC ON - ON	KC7687	R075
			MEPE		PS 8 OUTPUT LITE ON	GC5116	10C18
			LPDS		C14-626, P/S 8 DC OUTPUT POWER ON LITE ON		A1E
		13-041	MTPE	MEPE	PS 8 BAT RESET - ON	KC7689	R067
		13-042	MTPE	MEPE	PS 8 BAT ENABLE - ON	KC7688	R075
		13-043	MTPE	LPDS	C14-628 (PS 8) BATTERY BACK UP SW - OFF		
				LPDS	BATTERY ON LITE REMAINS ON		
				MEPE	PS 8 BAT EN LITE REMAINS ON	GC5118	
					PS 8 BAT ON LITE OFF	GC5117	10C19
		13-044	MTPE	MEPE	PS 8 FEEDER BUS B - ON	KC7690	C076
			MEPE		22 0212 4331 IS INSERTED		
		13-045	MTPE	MEPE	PS 8 FEEDER BUS C - ON	KC7691	C076
			MEPE		22 0212 4341 IS INSERTED		

CAUTION

SLOW SWITCHING OF THE FOLLOWING TWO FEEDER BUS SWITCHES FROM LOCAL TO REMOTE COULD RESULT IN A POWER LOSS DUE TO THE BREAK BEFORE MAKE ACTION OF THE SWITCHES.

		13-046	MTPE	LPDS	PS 8 FEEDER BUS B - REMOTE		
			LPDS		BUS B FEEDER LITE REMAINS ON		
		13-047	MTPE	LPDS	PS 8 FEEDER BUS C - REMOTE		
			LPDS		BUS C FEEDER LITE REMAINS ON		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		13-048	MTPE	MECS	400 HZ PRI - ON	KC7693 R016
		13-049	MTPE	MECS	400 HZ BU - ON	KC7694 R016
		13-050	MTPE	CSGS	LCC MOBILE LUANCHER PWR 400 CPS SW - ON	
			CSGS		ACTIVATE LITE REMAINS ON	
		13-051	MTPE	MECS	400 HZ PRI - OFF	KC7693 R016
			CSGS		ACTIVATE LITE OFF	
			LPDS		LOAD TO BU UNIT LITE ON	
		13-052	MTPE	MECS	400 HZ PRI PWR - ON	KC7693 R016
			CSGS		ACTIVATE LITE ON	
			LPDS		LOAD TO PRIMARY UNIT LITE ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
-10330		14-000			SC BUS POWER UP - PRECOUNT		
		14-001	MTPE	MEPS	POWER UP CSM.		
		14-002	MEPS	MSEQ	MESC INDICATE PWR - ON	KD7021	R084
			MSEQ		SMJC A SAFE LITE ON	SD0352	
					SMJC B SAFE LITE ON	SD0353	
					LOGIC BUS SAFE LITE ON	CD0088	
					PYRO BUS SAFE LITE ON	CD0218	
					MESC SYS A SAFE LITE ON	CD0084	
					MESC SYS B SAFE LITE ON	CD0085	
		14-003	MEPS	SLMP	PANEL 3 - VERIFY NO DC VOLTAGE OR CURRENT INDICATIONS ON ALL POSITIONS		
		14-004	MEPS	SCMP	PANEL 250		
					BAT A PWR ENTRY/PL CB - CLOSE	250C020	
					BAT B PWR ENTRY/PL CB - CLOSE	250C021	
					BAT C PWR ENTRY/PL CB - CLOSE	250C022	
					BAT C BAT CHGR/EDS 2 CB - CLOSE	250C023	
					PYRO A SEQ A CB - CLOSE	250C016	
					PYRO B SEQ B CB - CLOSE	250C017	
		14-005	MEPS	SLMP	PANEL 3 - READOUT DC INDICATIONS..		
					PYRO A VDC		35.5 +/- 2.5
					PYRO B VDC		35.5 +/- 2.5
					BAT BUS A VDC		35.5 +/- 2.5
					BAT BUS A AMPS		ENG INFO
					BAT BUS B VDC		35.5 +/- 2.5
					BAT BUS B AMPS		ENG INFO
					BAT C VDC		35.5 +/- 2.5
					BAT C AMPS		ENG INFO

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		14-005		SCMP	PANEL 250		
					PYRO A SEQ A CB - OPEN	250C016	
					PYRO B SEQ B CB - OPEN	250C017	
					VERIFY NOT MORE THAN 20 VDC ON ALL OTHER POSITIONS		
		14-006	MEPS	SLMP	PANEL 3		
					FC1		
					MN BUS A TB-BP		
					MN BUS B TB-BP		
					FC2		
					MN BUS A TB-BP		
					MN BUS B TB-BP		
					FC3		
					MN BUS A TB-BP		
					MN BUS B TB-BP		
		14-007	MEPS	MEPE	PS A TO BUS A - ON	KC7024	R100
					PS B TO BUS B - ON	KC7034	R101
					GND PS A VDC (P1-3) -----	GC5024	30+/-2
					GND PS A AMPS (P1-4) -----	GC5025	ENG INFO
					GND PS B VDC (P1-3) -----	GC5028	30+/-2
					GND PS B AMPS (P1-4) -----	GC5029	ENG INFO
		14-008	MEPS	UFET	C14-205		
					CB17 - CLOSE		
					CB2, 13, 15, 17, 19 LITES ON		
			MEPS		MTR SW PS VOLTS VDC (P2-21) -----	GC5030	38 +2/-0
		14-009	MEPS		SM MTR SW OPEN LITE ON	SC2410	
		14-010	MEPS	MEPE	SM MTR SW CLOSE - ON	KC7636	R102
			MEPS		SM MTR SW OPEN LITE OFF	SC2410	10C18

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		14-011	MEPS	SLMP	PANEL 3	
					MN BUS A _____ VDC	29 +/-2
					MN BUS B _____ VDC	29+/-2
					MN BUS A RESET - RESET, REL 003S017	
					MN BUS B RESET - RESET, REL 003S026	
		14-012	MEPS	SCMP	PANEL 225	
					CTE	
					MNA CB - CLOSE 225C021	
					MNB CB - CLOSE 225C022	
		14-013	MEPS	MECS	VERIFY ECS GSE COOLING IS OPERATIONAL.	
		14-014	MEPS	SLMP	PANEL 3	
					AC INV 1 SW - MNA 003S057	
					AC INV 2 SW - MNB 003S058	
				MEPE	HRS _____ MIN _____ SEC _____	
		14-015	MEPS	SLMP	PANEL 3	
					AC INV 1 AC BUS 1 SW - (ON-UP) 003S060	
			SLMP		BUS 1 PHASE A _____ VAC	115 +/-5
					BUS 1 PHASE B _____ VAC	115 +/-5
					BUS 1 PHASE C _____ VAC	115 +/-5
					AC INV 2 AC BUS 2 SW - (ON-UP) 003S065	
					BUS 2 PHASE A _____ VAC	115 +/-5
					BUS 2 PHASE B _____ VAC	115 +/-5
					BUS 2 PHASE C _____ VAC	115 +/-5

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		14-016 MEPS		SLMP	PANEL 3	
					AC BUS 1 RESET SW - RESET, REL	003S063
					AC BUS 2 RESET SW - RESET, REL	003S067
		14-017 MEPS		SLMP	PANEL 5	
					C/W MN A CB - CLOSE	005C052
					C/W MN B CB - CLOSE	005C053
				MEPE	HR MIN SEC	
		14-018 MEPS		SCMP	PANEL 2	
					C/W PWR SW - 1	002S009
					C/W NORM SW - NORMAL	002S007
		14-019 MEPS		SCDR	PANEL 1	
					MASTER ALARM PB - RESET	001S001

NOTE

THE FOLLOWING C AND W LITES
ON PANEL 2 WILL COME ON..

FC 1
FC 2
FC 3
SUIT COMPRESSOR
SM RCS A
SM RCS B
SM RCS C
SM RCS D
SPS PRESS
CRYO PRESS
CMC

		14-020 MEPS		SCMP	PANEL 2	
					C/W NORMAL SW - ACK	002S007

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		14-020			PCM ACTIVATION		
		14-021	MTPE	MREC	ACTIVATE PCM AND OPERATIONAL INSTR.		
		14-022	MREC	UFET	C14-205		
					CB 6 - CLOSED		
			UFET		CB6 LITE ON		
		14-023	MREC	SCMP	PANEL 225		
					SIG COND CB - CLOSE	225C016	
					UDL FLT BUS CB - CLOSE	225C010	
		14-024	MREC	SLMP	PANEL 3		
					UP TLM CMD SW - RESET THEN OFF	003S039	
		14-025	MREC	SLMP	PANEL 4		
					TELECOM		
					GRP 1 SW - AC1	004S004	
					GRP 2 SW - AC2	004S005	
		14-026	MREC	ALL	STANDBY FOR MOMENTARY LOS		
		14-027	MREC	MACE	IN R112 INSERT 0000		R112
				MACE	SYNC ACQUIRED.		
		14-028	MREC		VERIFY AND RECORD		
					PCM TIMING EXT - ON	CT0340	
					CTE COUNTING (PROPER ADVANCE) (P11-01)	CT0145	
					PCM BIT RATE NORM (01100110) (P11-05)	CT0120	
					PCM HI LEVEL 85 PERCENT (P11-04) VDC	CT0125	4.2-4.3
					PCM HI LEVEL 15 PERCENT (P11-04) VDC	CT0126	0.7-0.8

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		14-029	MREC	SLMP	PANEL 3		
					NOTE MASTER ALARM MAY ACTIVATE WHEN SCE SWITCH IS SET TO NORM. IDENTIFY AND RESET.		
					PWR SCE SW - NORM	003S052	
					TIME ----------		
		14-030	MREC		VERIFY AND RECORD		
					SCE POS SUP VDC (P11-02) -----	CT0015	19.5- 20.5
					SCE NEG SUP VDC (P11-02) -----	CT0016	-19.5 -20.5
					SENS EXCIT +5V VDC (P11-03) -----	CT0017	4.8-5.2
					SENS EXCIT +10V VDC (P11-03) -----	CT0018	9.6- 10.4
		14-031	MTPE	SLMP	PANEL 5		
					INST ESS MNA CB - CLOSE ESS MNB CB - CLOSE	 005C019 005C020	
			MSEQ		ELS SAFE LITES (8) ON	CE0310 THRU CE0317	
		14-032	MREC	MTPE	PCM AND OPERATIONAL INSTR ACTIVATION COMPLETE		
			MEPS		BAT RLY BUS VDC (P1-15) -----	CC0232	35.5 +/-2.5

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		14-033	MTPE	SLMP	PANEL 4	
					ECS GLY PUMPS SEL - 2 AC 1 (TIME)	

					DELETED	*1
					!	
		14-034	MTPE	SCMP	PANEL 229	*1
					02 VAC ION PUMPS	
					MN A CB - CLOSE 229C050	
					MN B CB - CLOSE 229C051	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		15-000			TEST OPERATIONS - PRECOUNT	
-10300		15-001	MSTC	CVTS	CSM PWR IS ON	
		15-002	MSEQ	SCDR	PANEL 8	
					SECS	
					ARM A CB - CLOSE	008C001
					ARM B CB - CLOSE	008C002
					LOGIC A CB - CLOSE	008C003
					LOGIC B CB - CLOSE	008C004
					RCS LOGIC	
					MNA CB - CLOSE	008C043
					MNB CB - CLOSE	008C044
					SECS LOGIC 1 SW - (ON - UP)	008C011
				MSEQ	LOGIC BUS ARMED LITE ON	CD0089
					LOGIC BUS SAFE LITE OFF	CD0088
		15-003	MSEQ	SCMP	PANEL 2	
					RCS CMD SW - OFF, REL	002S043
					RCS TRNFR SW - SM, REL	002S044
				MSEQ	GSE SM RCS RESET A AND B - ON	KR9422 R080
					RCS ENABLE A LITE OFF	CD0170
					RCS ENABLE B LITE OFF	CD0171
					MESC SYS A SAFE LITE ON	CD0084
					MESC SYS B SAFE LITE ON	CD0085
					RCS CONTROL SAFE LITE ON	CD0270
					SMJC A AND B SAFE LITES ON	SD0352
						SD0353
					PYRO BUS SAFE LITE ON	CD0218
					PYRO BUS ARMED LITE OFF	CD0219
		15-004	MSEQ	SCDR	PANEL 8	
					SECS	
					LOGIC 1 SW - OFF	008S011
					LOGIC A CB - OPEN	008C003
					LOGIC B CB - OPEN	008C004
					ARM A CB - OPEN	008C001
					ARM B CB - OPEN	008C002

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		15-005	MTPE	CTSC	PROVIDE TWA WATER SAMPLING AND ANALYSIS SUPPORT ON LEVEL 4C IN 30 MIN.	
		15-006	MTPE	MECS	CLEAR TO PROCEED WITH POWER ON PORTION OF WATER SERVICING.	
-99 00		15-006A	MTPE	CSGS	PROCEED WITH SEQ 39-001, 2V2.	REPORT COMPL.*2
-92 30		15-007	CVTS	MSTC	RF SILENCE IS IN EFFECT	
-91 00		15-007A	MTPE	CSGS	PROCEED WITH SEQ 39-001, 2V2.	REPORT COMPL.*2
-90 00		15-008	MTPE	MECS	VERIFY WATER SERVICING COMPLETE.	
		15-009	MTPE	ALL	VERIFY READY TO POWER DOWN SC	
		15-010	MTPE	SLMP	PANEL 4 ECS GLYCOL PUMPS SEL - OFF TIME ----------	
		15-011	MTPE	MEPS	PROCEED WITH SC POWER DOWN	
		15-012	MEPS	ALL	STANDBY FOR MOMENTARY LOS	
		15-013	MEPS	MACE	GO TO INTERNAL TIMING. DISABLE CM A/B DATA. R112 - 1010 VERIFY SYNC	
		15-014	MEPS	SCMP	PANEL 2 STATUS C/W LITES C/W PWR SW - OFF (CTR)	
		15-015	MEPS	SLMP	PANEL 5 C/W MNA CB - OPEN 005C052 C/W MNB CB - OPEN 005C053	
		15-016	MEPS	SLMP	PANEL 4 TELCOM GRP 1 SW - OFF 004S004 GRP 2 SW - OFF 004S005 PANEL 5 INST ESS MNA CB - OPEN 005C019 ESS MNB CB - OPEN 005C020	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		15-016	MSEQ		ELS SAFE LITES (8) - OFF	CE0310 THRU CE0317
					PANEL 3	
					PWR SCE SW - OFF	003S052
					INV 2 AC BUS 2 SW - OFF	003S065
					INV 1 AC BUS 1 SW - OFF	003S060
					INV 2 SW - OFF	003S058
					INV 1 SW - OFF	003S057
				MEPS	HRS ----- MIN ----- SEC -----	
		15-017	MEPS	SLMP	VERIFY AC BUS 1 AND 2 90 VAC MAX	
		15-018	MEPS	SCMP	PANEL 225	
					CTE MNA CB - OPEN	225C021
					CTE MNB CB - OPEN	225C022
		15-019	MEPS	UFET	C14-205 CB6 - OPEN	
				UFET	CB6 LITE OFF	
			MEPS		MTR SW PS ----- VDC (P2-21)	GC5030 39+/-1
		15-020	MEPS	MEPE	SM MOTOR SW CLOSE - OFF	KC7636 R102
			MEPE		MTR SW OPEN LITE ON	SC2410
		15-021	MEPS	SLMP	PANEL 3	
					VERIFY MN BUS A AND MN BUS B 20 VDC MAX	
		15-022	MEPS	MEPE	PS A TO BUS A - OFF	KC7024 R100
					PS B TO BUS B - OFF	KC7034 R101
				UFET	C14-205 CB 8 THRU 15 LITES OUT	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		15-023	MEPS	SCMP	PANEL 250		
					PYRO A SEQ A CB - OPEN	250C016	
					PYRO B SEQ B CB - OPEN	250C017	
					BAT A PWR ENTRY AND PL CB - OPEN	250C020	
					BAT B PWR ENTRY AND PL CB - OPEN	250C021	
					BAT C PWR ENTRY AND PL CB - OPEN	250C022	
					BAT C BAT CHGR AND EDS 2 CB - OPEN	250C023	
		15-024	MEPS	MSEQ	MESC INDICATE PWR - OFF	KD7021	R084
			MSEQ		SMJC A SAFE LITE OFF	SD0352	
					SMJC B SAFE LITE OFF	SD0353	
					LOGIC BUS SAFE LITE OFF	CD0088	
					PYRO BUS SAFE LITE OFF	CD0218	
					MESC SYS A SAFE LITE OFF	CD0084	
					MESC SYS B SAFE LITE OFF	CD0085	
		15-025	MEPS	SLMP	PANEL 3		
					VERIFY ALL DC INDICATOR POSITIONS INDICATE 20 VDC MAX		
		15-026	MEPS	MTPE	SC POWER DOWN COMPLETE		
		15-027	MTPE	ALL	PROCEED WITH GSE POWER DOWN		
		15-028	MTPE	MECS	POWER DOWN ECS GSE PER SEQ 05 V2		
		15-029	MECS	MTPE	ECS GSE IS POWERED DOWN		
		15-030	MTPE	MEPS	POWER DOWN GSE POWER DISTRIBUTION		
		15-031	MEPS	MEPE	BUS A FLTR ON/OFF - OFF	KC7768	R075
			MEPE		GR PWR FLTR BANK A ON LITE OFF	GC5075	
		15-032	MEPE	MEPE	BUS B FLTR ON/OFF - OFF	KC7769	R075
			MEPE		GR PWR FLTR BANK B ON LITE OFF	GC5076	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		15-033	MEPS	MEPE	PS B DC ON (R101) - OFF	KC7702	
				MEPE	GSE BUS PS B IS 0+2-0 (P1-11) PS B OUTPUT ON LITE OFF	GC5128	10C05
				LPDS	C14-626 P/S 4 DC OUTPUT POWER LITE OFF		
		15-034	MEPS	MEPE	PS B AC START (R101) - OFF	KC7032	
				MEPE	GSE BUS PS B IS 0+2-0 (P1-3)	GC5028	
				LPDS	C14-626 PS 4 AC INPUT POWER ON LITE OFF		
		15-035	MEPS	MEPE	PS A DC ON (R100) - OFF	KC7698	
				MEPE	GSE BUS PS A IS 0+2-1 (P1-11) PS A OUTPUT ON LITE OFF	GC5132 GC5124	10C02
				LPDS	C14-626 PS 3 DC OUTPUT POWER ON LITE OFF		
		15-036	MEPS	MEPE	PS A AC START (R100) - OFF	KC7022	
				MEPE	GND PS VOLTS BUS A IS 0+2-0 (P1-3)	GC5024	
				LPDS	C14-626 PS 3 AC INPUT POWER ON LITE OFF		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		15-037	MTPE	SPAD	PERFORM ACCESS DOOR STATUS CHECK.	

NOTE

THE FOLLOWING REPRESENTS A SUMMATION OF ACCESS DOOR STATUS. ''ON'' MEANS FLIGHT DOOR INSTALLED WITH MOUNTING. ''OFF'' INDICATES DOOR IS OFF FOR REQUIRED ACCESS, CABLE PENETRATION, HOSE PENETRATIONS, ETC. WHEN CABLES AND HOSES ARE CONNECTED THE AREA IS PROTECTED WITH PLASTIC TO MINIMIZE PROBLEMS DIE TO LEAKS OR SPILLS.

COMMAND MODULE	DESIRED	ACTUAL
CM2	ON	------
CM8	OFF	------
CM10	OFF	------
CM11	ON	------
CM13	ON	------
CM14	ON	------
CM15	OFF	------
CM17	ON	------
CM23	ON	------
CM24	ON	------

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		15-037			COMMAND SERVICE MODULE FAIRINGS		
					CSM1	ON	
					CSM2	ON	
					CSM3	ON	
					CSM4	ON	
					CSM5	ON	
					CSM6	ON	
					CSM7	OFF	
					CSM8	ON	
					CSM9	ON	
					A34-388 (CSM 10)	OFF	
					CSM11	ON	
					SERVICE MODULE		
					SM1	ON	
					SM2	ON	
					SM3	OFF	
					SM4	OFF	
					SM5	OFF	
					SM6	OFF	
					SM7	OFF	
					SM8 (4 EA) (LOWER)	OFF	
					SM8 (4 EA) (UPPER)	ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		15-037			SM9 (2 EA)	ON	
					SM10 (6 EA)	ON	
					SM11	OFF	
					SM12	OFF	
					SM13	OFF	
					SLA		
					C1	ON	
					C2	ON	
					C3	ON	
					C4	ON	
					D1	OFF	
					D2	OFF	
					D3	OFF	
					D4	OFF	
					D5	OFF	
					D6	OFF	
					C7	OFF	
					D8	OFF	
					D9	OFF	
					D10	OFF	
					D11	OFF	
					D12	OFF	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		15-037			D13	OFF	------
					D14	OFF	------
					D15	ON	------
					D16	ON	------
					+YII (TOP)	OFF	------
					-ZI (TOP)	OFF	------
					+ZIII	ON	------
					-YIV	ON	------
-89 00		15-038	MSTC	CVTS	1. CLEAR CONTROL AREA FOR SC HEAVY ORDNANCE OPERATIONS.		
					2. VERIFY RF SILENCE ON UNTIL T-84 00		
					3. CHANCE SMDPS TO 2 SW MODE		
		15-039	MTPE	SPAD	CLEAR NON-ESSENTIAL PERSONNEL FOR HEAVY ORDNANCE HOOK-UP.		

NOTE

ESSENTIAL SC PERSONNEL ARE..

NR	NASA	GAEC
SPAD (1)	QC (3)	QC(SLA MON)
TECHNICIANS (6)	ENG (2)	
TECH SUPV (1)	PVSS	
QC (4)	SUPPORT	
ENG. (2)	-------	
SAFETY (1)	TECHNICOLOR	

*2

15-039A KSTC MSTC SLA EMERG EGRESS SYSTEM CONTROL WILL BE TRANSFERRED FROM LM PAD LEADER TO NR PAD LEADER. *2

15-039B MTPE SPAD VERIFY CONTROL OF SLA EMERG EGRESS SYSTEM.*2

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
					WARNING LM EQUIP BAY PURGE HAS BEEN ACTIVATED (4 LB GN2). SHOULD A LOSS OF SLA AIR OCCUR DURING HEAVY ORD INSTL, PERSONNEL IN THE SLA/IU AREA SHOULD BE EVACUATED WITHIN 10 MIN.	*2
-88 30		15-040	CVTS	MSTC	CLEAR TO START HEAVY ORDNANCE OPNS.	
		15-041	MTPE	SPAD SNQC	PROCEED WITH HEAVY ORDNANCE OPERATIONS PER OCP-K-4617, PARA 9.0.	
		15-042	MTPE	SPAD	PROCEED WITH T/S 8.2.8.1 AS REQUIRED TO SUPPORT TCP-K-4617. REPORT COMPLETION ------ ------- NR QC NASA QC	
-85 00		15-043	SPAD	MTPE	1. HEAVY ORDNANCE INSTALLATION AND HOOK-UP COMPLETE.	
					2. NON-ESSENTIAL PERSONNEL ARE CLEARING TO FALL BACK AREA AT PERIMETER ROAD.	
		15-044	MTPE	SNQC	REPORT VERIFICATION OF ORD. H/U.------ ------- NR QC NASA QC	
		15-045	MTPE	SPAD	1. PROCEED WITH BRIDGE SET-UP FOR REMOTE RESISTANCE CKS PER K-4617, PARA 9.3 THRU 9.3.4	
					2. HAVE PYRO PERSONNEL VERIFY TV SET UP FOR REMOTE RESISTANCE CHECKS.	
					3. REPORT IN PRIOR TO CLEARING FOR REMOTE RESISTANCE CHECKS	
		15-046	MSTC	CVTS	1. CLEAR LV PYRO PERSONNEL FROM CONTROL AREA FOR SC REMOTE RESISTANCE CHECKS.	
					2. NOTIFY BOTV THAT OTV CAMERA NO. 25 MUST BE PATCHED TO MONITOR 1A UNTIL COMPLETION OF REMOTE RESISTANCE CHECKS.	
					3. INITIATE VIDEO RECORDING.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		15-047	SPAD	MTPE	1. BRIDGE SETUP COMPLETE.	
					2. READY FOR REMOTE RESIS CKS.	
		15-048	MTPE	SNQC	REPORT VERIFICATION OF BRIDGE SETUP COMPLETION.	NR QC / NASA QC
		15-049	MTPE	SPAD	1. CLEAR WITH PYRO PERSONNEL TO COMP. 1A FOR REMOTE RESISTANCE	
					2. REPORT ARRIVAL	
					NOTE WAIT FOR SPAD REPORT FROM COMPT 1A.	
					NOTE ESSENTIAL SC PERSONNEL AS FOLLOWS..	

NR (1EA.)	NASA (1 EA.)
SPAD	ENGINEER
ENGINEER	QC
TECHNICIAN	PVSS
QC	

-84 30		15-050	MSTC	CVTS	1. VERIFY PAD CLEAR OF ALL NON-ESSENTIAL PERSONNEL FOR REMOTE RESISTANCE CHECKS.	
					2. SC PERSONNEL ARE IN COMPT 1A.	

TIME	COMM CM	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		15-051	MTPE	SPAD	PROCEED WITH REMOTE RESISTANCE CHECKS PER TCP-K-4617 PARA 9.3.5 THRU 9.3.10. REPORT COMPLETION	
					NOTE WAIT FOR COMPLETION	
		15-052	SPAD	MTPE	REMOTE RESIS. CHECKS COMPLETE	
		15-053	MTPE	SNQC	REPORT VERIF. OF REMOTE RESIS. CHECKS COMPLETION. ------ NR QC ------- NASA QC	
-84 00		15-054	MSTC	CVTS	1. SC PYRO OPERATIONS COMPLETE. 2. PAD MAY BE OPENED FOR NORMAL WORK. VERIFY WHEN OPEN. 3. RF SILENCE NO LONGER REQUIRED. 4. CLEAR TO TERMINATE VIDEO RECORDING. 5. CHANGE SMDPS TO 2 SW/1 VLV MODE	
		15-055	MTPE	SPAD	PERFORM T/S 8.1.4, VOL 2.	
		15-056	MTPE		PERFORM PRE-POWER SW LIST.	
		15-056A	MTPE	CSGS	PROCEED WITH SEQ 39-001, 2V2. REPORT COMPL.	*2
-83 30		15-057	KSTC	MSTC	TRANSFER CONTROL OF SLA EMERGENCY EGRESS SYS TO LM PAD LEADER.	*2
		15-058	MTPE	SPAD	TRANSFER CONTROL OF SLA EMERG EGRESS SYSTEM TO LM PAD LEADER.	*2

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		16-000			CALL TO STATIONS ----------	
					SERVICING OPERATIONS LAUNCH ----------	
					NOTE 1. GSE POWER IS ON. 2. ACE UPLINK AND DOWNLINK ARE ON.	
					NOTE TEST SETUPS CONTAINED IN SECT 8.1.2	
-82 45		16-001	MSTC	ALL	1. ALL STATIONS REPORT VERIFICATION OF SETUPS ON ASSIGNED CHANNELS. 2. DO NOT REMOVE R START FUNCTIONS	
		16-002	MTPE		RECORD SETUP VERIFICATION REPORTS.. MACE ---------- REPORTS FOR ACE MSCS ---------- REPORTS FOR MSCL MSCR MECS ---------- REPORTS FOR MECE UWGR UGCU UGTR MLFC ---------- REPORTS FOR MHFC SOMD MEPS ---------- REPORTS FOR MEPE LPDS MSEQ SPDS SSET MSPS ---------- REPORTS FOR MSPE PFRS PORS MRCS ---------- REPORTS FOR MRCE SHTR SHVB SHCU MREC ---------- REPORTS FOR MPUG MQLD MGNS ---------- REPORTS FOR MGNL MGNR	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		16-002			MCSE --------- CSAT --------- MNQC --------- MGQC --------- SGQC --------- SNQC --------- SPAD REPORTS FOR SCET ---------LFET SFET UFET SCMT LMDR	
		16-003	MSTC	MNQC MGQC	REPORT CONSTRAINTS LIST STATUS. ----- NR QC ------- NASA QC	
		16-004	MSTC	SNQC SGQC	VERIFY TEST SET UP SHEET 8.32.4 ----- NR QC ------- NASA QC	
		16-005	MSTC	MRCS	VERIFY PERSONAL INSPECTION OF GSE HOOK UP STARTED	
		16-006	MSTC	CVTS	1. VERIFY CLEARANCE TO PROCEED WITH SERVICING OPERATIONS. 2. POWER WILL BE APPLIED TO THE CSM IN 30 MINUTES. 3. HAVE CTSC POSITION LN2 TANKER FOR HOOKUP TO S14-009.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
-82 30		17-000			GSE POWER UP - SERVICING --- OPERATIONS (LAUNCH) ---	
		17-001	MTPE	MEPS	PROCEED WITH GSE POWER UP	
		17-002	MEPS	CSAT	VERIFY.. 1. ML ACE PS BATT ENABLE ACTIVATED LITE ON 2. ML ACE BATT ON LITE OFF 3. ML CSM AND LM ACE (BUS B ACTIVATED LITE ON) 4. MSS ACE PS BATT ENABLE ACTIVATED LITE ON 5. MSS ACE BATT ON LITE OFF 6. MSS ACE BUS ACTIVATED LITE ON	
		17-003	MEPS	LFET	C14-240 VERIFY.. 1. AC PWR LITE ON 2. -12 VDC PWR LITE ON 3. +6 VDC PWR LITE ON 4. +12 VDC PWR LITE ON 5. +28 VDC PWR LITE ON C14-346 VERIFY.. C14-261 LITE (THRU WINDOW) C14-484 VERIFY.. 1. AM-1 LITE ON 2. AM-2 LITE ON 3. EM-1 LITE ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		17-004	MEPS	LPDS	C14-621 (UNITS 4 THRU 9) VERIFY.. 1. 115 VAC LITE ON 2. 208 VAC LITE ON 3. REMOTE LOCAL SW - REMOTE C14-624 VERIFY.. CB-1 - CLOSED C14-626 PS 2 VERIFY.. 1. AC INPUT POWER ON LITE ON 2. DC OUTPUT POWER ON LITE ON C14-626 PS 8 VERIFY.. 1. AC INPUT POWER ON LITE ON 2. DC OUTPUT POWER ON LITE ON C14-628 PS 2 VERIFY.. BATTERY ON LITE ON C14-628 PS 8 VERIFY.. BATTERY ON LITE ON C14-481 DC LOGIC A+B ON LITES ON AC POWER ON LITE ON BLOWER OPERATION HEAT SINK NO. 1 FAN OFF LITE OFF HEAT SINK NO. 2 FAN OFF LITE OFF VERIFY PS CONT REMOTE LITES - ON	
		17-005	MEPS	UFET	C14-232 VERIFY.. 1. MODE LOCAL/REMOTE SW REMOTE 2. DC POWER ON/OFF SW - ON 3. ELAPSED TIME METER RUNNING C14-267 VERIFY.. 1. EDTCS NO. 1 PWR LITE ON 2. EDTCS NO. 2 PWR LITE ON C14-205 VERIFY.. CB2 AND CB19 LITES ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		17-006	MEPS	PFRS	S14-060 VERIFY..	
					1. POWER ON LITE ON 2. CABINET PRESSURE GAGE IND 5 +1/-0 IN. H20. 3. PURGE ON LITE OFF 4. UNIT READY LITE ON 5. PHASE CORRECT LITE ON 6. REMOTE LITE ON	
				MSPE	S14-060 REMOTE LITE ON	
		17-007	MEPS	PORS	S14-061 VERIFY..	
					1. POWER ON LITE ON 2. CABINET PRESSURE GAGE IND 5 +1/-0 IN. H20. 3. PURGE ON LITE OFF 4. UNIT READY LITE ON 5. PHASE CORRECT LITE ON 6. REMOTE LITE ON	
				MSPE	S14-061 REMOTE LITE ON	
		17-006	MEPS	SFET	C14-240 VERIFY.. 1. AC PWR LITE ON 2. -12 VDC PWR LITE ON 3. +6 VDC PWR LITE ON 4. +12 VDC PWR LITE ON 5. +28 VDC PWR LITE ON	
					C14-268 VERIFY.. 1. AC PWR LITE ON 2. DC PWR LITE ON	
					C14-590 VERIFY.. 1. PANEL PWR SW ON 2. MAIN PWR CB1 ON 3. JB1, 5, 6, 7 AND 8 ON	
					C14-484.. VERIFY AC LITE ON VERIFY AM-1 LITE ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		17-009	MEPS	SPDS	C14-621 (UN+TS 10, 11, 12, 13) VERIFY.. 1. 115 VAC LITE ON 2. 208 VAC LITE ON 3. REMOTE LOCAL SW - REMOTE	
		17-010	MEPS	SPDS	C14-626 (PS1) VERIFY.. AC INPUT POWER ON LITE ON DC OUTPUT POWER ON LITE ON C14-628 (PS1) FEEDER BUS B ON LITE ON	
			MEPE		P/S 1 OUTPUT LITE ON P/S 1 BAT ENABLE LITE ON P/S 1 BAT ON LITE OFF P/S 1 OUTPUT VDC GSE BUS P/S 1 VDC	GC5138 10C22 GC5140 GC5139 GC5141 29+/-1 GC5149 29+/-1
		17-011	MEPS	SPDS	C14-626 PS5 VERIFY.. AC INPUT POWER ON LITE ON	
		17-012	MEPS	MEPE	VERIFY.. P/S 5 OUTPUT LITE ON P/S 5 BAT ON LITE OFF P/S 5 OUTPUT VDC GSE BUS P/S 5 VDC (P2-23)	GC5143 10C25 GC5144 GC5146 31+/-1 GC5150 31+/-1
			MEPE		VERIFY.. P/S 5 GSE BUS B ON LITE ON P/S 5 GSE BUS C ON LITE ON P/S 5 BAT ENABLE LITE ON	GC5147 10C28 GC5148 10C28 GC5145
			SPDS		C14-628 (PS5) (VERIFY) FEEDER BUS B ON LITE ON FEEDER BUS C ON LITE ON	
		17-013	MEPS	SFET	LDW410-11180-1 (LEM SW UNIT) VERIFY..	
			SFET		+28 VDC FACILITY LITE ON MODE CONCURRENT LITE ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		17-014	MEPS	SFET	C14-626 (PS 5) CB1 (C BUS) - CLOSED		
		17-015	MEPS	MEPE	ADJUST PS A OUTPUT TO 30.0 VDC		C076
			MEPE		30 0000 1300 IS INSERTED		
		17-016	MEPS	MEPE	ADJUST PS B OUTPUT TO 30.0 VDC		C076
			MEPE		30 0000 2300 IS INSERTED		
		17-017	MEPS	MEPE	PS A AC START - ON	KC7022	R100
			LPDS		PS 3 AC INPUT PWR LITE ON		
					PS3 VDC -----		30 +/- 2
		17-018	MEPS	MEPE	PS A DC - ON PS A DC ON LITE ON	KC7628 GV0127	R100
			MEPS		PS A VDC (P1-3) -----	GC5024	30+/-2
					SM MOTOR SW OPEN LITE ON	SC2410	
			LPDS		PS 3 DC OUTPUT PWR ON LITE ON		A12A2
		17-019	MEPS	MEPE	PS B AC START - ON	KC7032	R101
			LPDS		PS 4 AC INPUT PWR ON LITE ON		
					PS 4 VDC -----		30+/-2
		17-020	MEPS	MEPE	PS B DC - ON PS B DC ON LITE ON	KC7632 GV0129	R101
			MEPS		GND PS B VDC (P1-3) ----- SM MOTOR SW OPEN LITE ON	GC5028 SC2410	30+/-2
			LPDS		PS 4 DC OUTPUT PWR ON LITE ON		A11A2

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		17-021	MEPS	MEPE	BUS A FLTR ON/OFF - ON	KC7768	R075
			MEPE		GR PWR FLTR BANK A ON LITE ON	GC5075	
		17-022	MEPS	MEPE	BUS B FLTR ON/OFF - ON	KC7769	R075
			MEPE		GR PWR FLTR BANK B ON LITE ON	GC5076	
		17-023	MEPS	MTPE	GSE POWER UP IS COMPLETE.		
		17-024	MTPE	MECS	PROCEED WITH ECS GSE PWR UP AND SWITCH TO REMOTE PER SEQ 5, V2.		
		17-025	MTPE	MRCS MRCE SHTR SFDS SFMT SSMT CSAT MNQC SGQC SNQC	PROCEED WITH GSE POWER UP PER SEQ 13V2 ON CH 216. PFRS AND PORS MAY BE RELEASED FROM STATION UNTIL REQUIRED. (CSGS)		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
-82 15		18-000			S/C BUS POWER UP - SERVICING OPERATION		
					MIDCOUNT		
		18-001	MTPE	MEPS	PWR UP SC BUSES		
		18-002	MEPS	MSEQ	MESC INDICATE PWR - ON	KD7021	R084
			MSEQ		SMJC A SAFE LITE ON	SD0352	
					SMJC B SAFE LITE ON	SD0353	
					LOGIC BUS SAFE LITE ON	CD0088	
					PYRO BUS SAFE LITE ON	CD0218	
					MESC SYS A SAFE LITE ON	CD0084	
					MESC SYS B SAFE LITE ON	CD0085	
		18-003	MEPS	SLMP	PANEL 3 - VERIFY NO DC VOLTAGE OR CURRENT INDICATIONS ON ALL POSITIONS.		
		18-004	MEPS	SCMP	PANEL 250		
					BAT A PWR ENTRY/PL CB - CLOSE	250C020	
					BAT B PWR ENTRY/PL CB - CLOSE	250C021	
					BAT C PWR ENTRY/PL CB - CLOSE	250C022	
					BAT C BAT CHGR/EDS 2 CB - CLOSE	250C023	
					PYRO A SEQ A CB - CLOSE	250C016	
					PYRO B SEQ B CB - CLOSE	250C017	
		18-005	MEPS	SLMP	PANEL 3 - READOUT DC INDICATIONS..		
					PYRO BAT A VDC		35 +/- 2.5 VDC
					PYRO BAT B VDC		35 +/- 2.5 VDC
					BAT BUS A VDC		35 +/- 2.5 VDC
					AMPS		ENG INFO
					BAT BUS B VDC		35 +/- 2.5 VDC
					AMPS		ENG INFO
					BAT C VDC		35 +/- 2.5 VDC
					AMPS		ENG INFO

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		18-005			VERIFY 20 VDC MAX FOR ALL OTHER POSITIONS	
					PANEL 250	
					PYRO A SEQ A CB - OPEN	250C016
					PYRO B SEQ B CB - OPEN	250C017
		18-006	MEPS	SLMP	PANEL 3 FC1 MN BUS A TB-BP MN BUS B TB-BP FC2 MN BUS A TB-BP MN BUS B TB-BP FC3 MN BUS A TB-BP MN BUS B TB-BP	
		18-007	MEPS	MEPE	PS A TO BUS A - ON	KC7024 R100
			MEPE		SM MTR SW OPEN LITE ON	SC2410
		18-008	MEPS	MEPE	PS B TO BUS B - ON	KC7034 R101
			MEPE		SM MTR SW OPEN LITE ON	SC2410
		18-009	MEPS	UFET	C14-205 CB17 - CLOSE	
				UFET	CB2, 13, 15, 17, 19 LITES ON	
			MEPE		GND PSA AMPS (P1-4) -----	GC5025 10 MAX
					GND PSB AMPS (P1-4) -----	GC5029 10 MAX
					SM MTR SW PS ----- VDC (P2-21)	GC5030 39 +/- 1
		18-010	MEPS	MEPE	SM MOTOR SW CLOSE - ON	KC7636 R102
			MEPE		SM MTR SW OPEN LITE OFF	SC2410

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		18-011	MEPS	SLMP	PANEL 3	
					MN BUS A _____ VDC	29 +/-
					MN BUS B _____ VDC	29 +/- 2
		18-012	MEPS	MEPE	ADJUST MN BUS A TO 29.0 VDC	
		18-013	MEPS	MEPE	ADJUST MN BUS B TO 29.0 VOLTS	
		18-014	MEPS	SLMP	PANEL 3	
					MN BUS A RESET - RESET, REL	003S017
					MN BUS B RESET - RESET, REL	003S026
		18-015	MEPS	MTPE	DC PWR UP IS COMPLETE.	
		18-016	MTPE	SCMP	PANEL 225	
					CTE	
					MNA CB - CLOSED	225C021
					MNB CB - CLOSED	225C022
		18-017	MTPE	MECS	VERIFY ECS GSE POWER UP IS COMPLETE AND COOLING IS OPERATIONAL	
		18-018	MTPE	MEPS	PROCEED WITH AC BUS PWR UP.	
		18-019	MEPS	SLMP	PANEL 3	
					INV 1 SW - MNA	003S057
					INV 2 SW - MNB	003S058
				MEPE	TIME HR _____ MIN _____ SEC _____	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		18-020	MEPS	SLMP	PANEL 3		
					INV 1 AC BUS 1 SW - (ON-UP)	003S060	
					AC BUS 1 PH A VAC -----		115 +/-5
					PH B VAC -----		115 +/- 5
					PH C VAC -----		115 +/- 5
					INV 2 AC BUS 2 SW - ON (ON-UP)	003S065	
					AC BUS 2 PH A VAC -----		115 +/- 5
					PH B VAC -----		115 +/- 5
					PH C VAC -----		115 +/- 5
		18-021	MEPS	SLMP	PANEL 3		
					AC BUS 1 RESET SW - RESET, REL	003S063	
					AC BUS 2 RESET SW - RESET, REL	003S067	
		18-022	MEPS	SLMP	PANEL 5		
					C/W MNA CB - CLOSED	005S052	
					C/W MNB CB - CLOSED	005C053	
					TIME -----		
		18-023		SCMP	PANEL 2		
					C/W PWR SW - 1	002S009	
					C/W NORMAL - NORMAL	002S007	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		18-024	MEPS	SCDR	PANEL 1	
					MASTER ALARM PB - RESET	001S001
					NOTE THE FOLLOWING C AND W LITES ON PANEL 2 WILL BE ON.	
					SPS PRESS CRYO PRESS S/M RCS A S/M RCS B S/M RCS C S/M RCS D FC 1 FC 2 FC 3 SUIT COMPRESSOR CMC	
		18-025	MEPS	SCMP	PANEL 2	
					CW NORMAL SW - ACK	002S007
		18-026	MEPS	MTPE	AC BUS PWR UP IS COMPLETE.	
		18-027	MTPE	MREC	ACTIVATE THE PCM.	
		18-028	MREC	UFET	C14-205 CB-6 - CLOSE	
				UFET	CB6 LITE ON	
		18-029	MREC	SCMP	PANEL 225	
					UDL FLT BUS CB - CLOSED SIG COND CB - CLOSED	225C010 225C016
		18-030	MREC	SLMP	PANEL 4	
					TELCOM GRP 1 SW - AC1 GRP 2 SW - AC2	 004S004 004S005

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		18-031	MREC	ALL	STANDBY FOR MOMENTARY LOS.		
		18-032	MREC	MACE	GO TO EXTERNAL TIMING ENABLE CM A/B DATA (0000)		R112
				MACE	SYNC ACQUIRED		
		18-033	MREC		PCM TIMING EXTERNAL LITE ON	CT0340	
					CTE COUNTING (PROPER ADVANCE) (P11-1)	CT0145	
					BIT RATE 01100110 (P11-5)	CT0120	
					PCM HI LEVEL 85 PCT VDC (P11-4) -----	CT0125	4.2 4.3
					PCM HI LEVEL 15 PCT VDC (P11-4) -----	CT0126	0.7 0.8
		18-034	MREC	SLMP	PANEL 3		
					PWR SCE SW - NORM	003S052	
				MREC	SCE POS SUP VDC (P11-2) -----	CT0015	19.5 20.5
					SCE NEG SUP VDC (P11-2) -----	CT0016	-19.5 -20.5
					SCE EX +5V VDC (P11-3) -----	CT0017	4.8 5.2
					SEC EX +10V VDC (P11-3) -----	CT0018	9.6 10.4
		18-035	MREC	SLMP	PANEL 5		
					INST ESS MNA CB - CLOSED ESS MNB CB - CLOSED	005C019 005C020	
			MEPS		BAT RLY BUS VDC -----	CC0232	35.5 +/- 2.5
			MSEQ		ELS SAFE LITES (8) ON	CE0310 THRU CE0317	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		18-036	MREC	MTPE	INSTR SYSTEM ACTIVATION COMPLETE.	
		18-037	MTPE	SLMP	PANEL 4 ECS GLYCOL PUMPS SEL - 2 AC1 0045002 TIME ----------	
		18-038	MTPE	MREC	PROCEED WITH INSTRUMENTATION REDUNDANCY TESTS PER SEQ 02V2. REPORT COMPLETION.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		19-000			SERVICING OPERATIONS - MIDCOUNT		
-82 00		19-001	MSTC	CVTS	CSM PWR IS ON		
		19-002	MTPE	SCDR	PANEL 8		
					SECS		
					ARM A CB - CLOSE	008C001	
					ARM B CB - CLOSE	008C002	
					LOGIC A CB - CLOSE	008C003	
					LOGIC B CB - CLOSE	008C004	
					RCS LOGIC		
					MNA CB - CLOSE	008C043	
					MNB CB - CLOSE	008C044	
					SECS LOGIC 1 SW - (ON-UP)	008S011	
			MSEQ		LOGIC BUS ARMED LITE ON	CD0089	
					LOGIC BUS SAFE LITE OFF	CD0088	
		19-003	MTPE	SCMP	PANEL 2		
					RCS CMD SW - OFF, REL	002S043	
					RCS TRNFR SW - SM, REL	002S044	
		19-004	MTPE	MSEQ	GSE SM RCS RESET A+B - ON	KR9422	R080
			MSEQ		RCS ENABLE A+B LITES OFF	CD0170	
						CD0171	
					ELS SAFE LITES (8) ON	CE0310	
						THRU	
						CE0317	
					MESC SYS A SAFE LITE ON	CD0084	
					MESC SYS B SAFE LITE ON	CD0085	
					RCS CONTROL SAFE LITE ON	CD0270	
					SMJC A+B SAFE LITES ON	SD0352	
						SD0353	
					PYRO BUS SAFE LITE ON	CD0218	
					PYRO BUS ARM LITE OFF	CD0219	
		19-005	MTPE	SCDR	PANEL 8		
					SECS LOGIC 1 SW - OFF	008S011	
			MSEQ		LOGIC BUS ARMED LITE OFF	CD0089	
					LOGIC BUS SAFE LITE ON	CD0088	

TIME	COMM CM	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		19-006	MTPE	SCDR	PANEL 8		
					SECS		
					LOGIC A CB - OPEN	008C003	
					LOGIC B CB - OPEN	008C004	
					ARM A CB - OPEN	008C001	
					ARM B CB - OPEN	008C002	
		19-007	MTPE	MECS	VERIFY/SWITCH ECS GSE TO REMOTE.		
		19-007A	MSTC	KSTC	VERIFY PS8 FEEDER BUS C ON (DV0082).		*2
		19-007B	MTPE	MEPS	LM VERIFIED PS8 FEEDER BUS C ON.		*2
		19-008	MRCS	MTPE	1. GSE POWER UP COMPLETE		
					2. GSE LN2 FILL IS IN PROGRESS		
					3. STANDING BY FOR SC SOLENOID VALVE CONFIG VERIF.		
		19-009	MTPE	SCDR	VERIFY CONFIGURATIONS ON THE FOLLOWING		
				SCMP	PANELS..		
		19-010	MTPE	SCDR	PANEL 8		
					RCS		
					SM HTRS		
					A MN B CB - CLOSE	008C037	
					C MN B CB - CLOSE	008C038	
					B MN A CB - CLOSE	008C039	
					D MN A CB - CLOSE	008C040	
		19-011	MTPE	MRCS	SM RCS HE AUX ISOL LITES		
					A - OFF	SR5097	
					B - OFF	SR5098	
					C - OFF	SR5099	
					D - OFF	SR5100	
		19-012	MTPE	SCMP	PANEL 2		
					SM RCS		
					HE 1		
					A TB - BP	002D002	
					B TB - BP	002D003	
					C TB - BP	002D004	
					D TB - BP	002D005	
					HE 2		
					A TB - BP	002D008	
					B TB - BP	002D009	
					C TB - BP	002D010	
					D TB - BP	002D011	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		19-012			PRIM PRPLNT	
					A TB - BP	002D014
					B TB - BP	002D015
					C TB - BP	002D016
					D TB - BP	002D017
					SEC PRPLNT	
					A TB - BP	002D025
					B TB - BP	002D024
					C TB - BP	002D027
					D TB - BP	002D026
					CM RCS PRPLNT	
					1 TB - BP	002D012
					2 TB - BP	002D013
					C/W PWR SW - (OFF, CTR)	
		19-013	MTPE	MRCS	PROCEED WITH HE SERV PRE-FLIGHT PAD PRESS PER SEQ 13V2 ON CH 216.	
		19-014	MRCS	MTPE	RCS PRE-FLIGHT PAD PRESSURIZATION COMPLETE.	
		19-015	MTPE	SCMP	PANEL 2	
					STATUS C/W LITES	
					C/W PWR SW - OFF (CTR)	
		19-016	MTPE	SLMP	PANEL 5	
					C/W MN A CB - OPEN	005C052
					C/W MN B CB - OPEN	005C053
		19-017	MTPE	UFET	C14-205	
					CB 11 - CLOSED	
					CB 12 - CLOSED	
-79 00		19-018	MTPE	MRCS	VERIFY ENGINEERING WALKDOWN INSPECTION COMPLETE.	
		19-019	MTPE	SPAD	CLEAR TOTAL PAD TO PERIMETER FENCE FOR HELIUM SERVICING.	
		19-020	MSTC	CVTS	1. REQUEST CPSS CLEARANCE FOR HELIUM SERVICING TO FLIGHT PRESSURE.	
					2. CHANGE SMDPS TO 2 SW MODE.	

WARNING

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		19-020				
					HELIUM SYSTEM WILL BE PRESSURIZED TO GREATER THAN 50 PCT. DB.	
-78 30		19-021	MTPE	MRCS	PROCEED WITH HELIUM SERVICING TO FLIGHT PRESSURES PER SEQ. 13, V2.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-75 30		19-022	MRCS	MTPE	1. HELIUM SERVICING IS COMPLETE.	
					2. CLEAR DISCONNECT CREW TO THE VEHICLE - TO REPORT IN TO MRCS ON CH 226.	
					NOTE	
					DISCONNECT CREW..	
					4C LEVEL: SRCS*, SPAD, SCMT (4), SNQC (2), SGQC 4A LEVEL: SSPS*, SSMT (5), SNQC (2), SGQC (2) ROVING: PVSI, SNRS, SSPS, (NASA)	
					(22 FT LEVEL): SHTR, SNQC PAD APRON: NR TRUCK DR (1) LUT: UFET, LNQC	
					* CONTINGENCY PERSONNEL	*2
		19-022A	MTPE	CSGS	PROCEED WITH SEQ. 39-0001,2V2. REPORT COMPL.	*2
		19-023	MSTC	CTSC	TURN ON OTV CAMERAS.. 47 (S14-009) 53 (HE VALVE BOX) 54 (VEHICLE) PATCH TO MSOB CONTROL ROOM MONITORS. INITIATE VIDEO RECORDING.	
		19-024	MSTC	CVTS	CSM HELIUM SERVICING COMPLETE. VERIFY CPSS CLEARANCE FOR HELIUM LINE DISCONNECT CREW.	
		19-025	MTPE	SPAD	PROCEED TO SILO 4 AND -22 FT LEVEL WITH HELIUM LINE DISC CREW.	
		19-026	MTPE	MRCS	PROCEED WITH HELIUM LINE DISCONNECT PER SEQ. 13, V2.	
		19-026A	MTPE	UFET	C14-205 CB11 - OPEN	*2
		19-027	MRCS	MTPE	SM QUAD LINE DISCONNECT COMPLETE TIME ____ HRS. SM HELIUM ISOLATION VALVES MUST BE CLOSED 10 HOURS FROM	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		19-027			ABOVE TIME. PROCEEDING WITH CM LINE DISCONNECT.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
-74 00		19-028	MRCS	MTPE	HELIUM LINE DISCONNECT IS COMPLETE. HELIUM SERVICING GSE IS READY TO SUPPORT LM GHE LOADING. DISCONNECT CREW IS CLEARING PAD.	
		19-029	MTPE	SNQC	REPORT VERIF. OF HELIUM LINE DISC. ----- NR QC ------- NASA QC	
	111	19-030	MSTC	CVTS	CSM HELIUM LINE DISCONNECT AND GSE VENTINGS COMPLETE.	
		19-031	MSTC	CTSC	CLEAR TO SECURE VIDEO RECORDING - CAMERA 53, 54.	
		19-032	MTPE	MRCS	VERIFY SWITCH UNIT CONTR CMD - OFF	KP7422 R192A
		19-033	MTPE	SPAD	CLEAR CSM PERSONNEL TO FALLBACK AREA FOR LM SERVICING.	
-73 30	242	19-034	MSTC	KSTC	S14-009 IS IN REMOTE AND LM CONTROL ENABLED.	
	222	19-035	KSTC	MSTC	S14-009 IS UNDER LM CONTROL. NR CONTROL INHIBITED.	
					NOTE LM SERVICING OPERATIONS CONTINUE	
-70 30		19-036	KSTC	MSTC	S14-009 IS IN REMOTE AND NR CONTROL ENABLED	
		19-037	MTPE	MRCS	1. S14-009 IS IN REMOTE. 2. PROCEED WITH VENT DOWN AND PWR DOWN OF S14-009 PER SEQ 13, V2.	
		19-038	MSTC	CVTS	CLEAR AREA WITHIN 50 FT RADIUS OF MSS FUEL AND OXID STUB TOWERS FOR HYPERGOLIC LINE DISCONNECT. VERIFY CPSS CLEARANCE TO PROCEED WITH SCAPE OPERATIONS.	
		19-039	MTPE		NOTIFY FUEL AND OXIDIZER SCAPE AND SPLASH CREWS TO REPORT ON STATION.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		19-039			NOTE HYPERGOLIC DISCONNECT CREWS.. ROVING (AS REQUIRED) PVSS SHTR SNRS SNQC SSPS SCAPE SUIT OPERATIONS STUB TWR NOTE SPLASH MAY BE USED TO REMOVE EVERY OTHER BOLT FROM FLANGE. FUEL: PFTR (2), PNQC (1) OXID: POTR (2), PNQC (1) NOTE WASTE TANKER, TVD AND LIQ. SEP. OPERATIONS MAY BE PERFORMED IN SPLASH WITH CONCURRENCE OF KSC SYSTEMS AND NR SAFETY.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		19-039			WASTE TANKER	
					FUEL: PFRS (2), PNQC (1) — OXID: PORS (2), PNQC (1)	
					(SPLASH MAY BE USED IF TANKER IS DRY)	
					TVD + LIQ. SEP.	
					FUEL: PFCU (2) MECH, PFCU (1) ELECT, PNQC (1) — OXID: POCU (2) MECH, POCU (1) ELECT, PNQC (1)	
		19-040	MTPE	MSPS	PROCEED WITH HYPERGOLIC LINE DISCONNECT PER SEQ. 13, V2.	
		19-041	MTPE	PFRS	S14-060 CB 1 - OFF (OPEN)	
		19-042	MTPE	PORS	S14-061 CB 1 - OFF (OPEN)	
		19-043	MSPS	MTPE	HYPERGOLIC LINE DISCONNECT COMPLETE.	
					NOTE: IN THE FOLLOWING SEQ. NASA QC VERIFIES S/C DISC. ONLY.	
		19-044	MTPE	SNQC	VERIFY HYPER LINE DISC COMPLETE.------ NR QC	
-66 30	111	19-045	MSTC	VTS	1. HYPER DISCONNECT COMPLETE.	
					2. PAD MAY BE OPENED FOR NORMAL WORK.	
		19-046	CVTS	MSTC	PAD OPEN FOR NORMAL WORK.	
		19-047	MTPE	SPAD	PAD OPEN FOR NORMAL WORK. REPORT WHEN ON STATION.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		19-048	MTPE	MPUG	PROCEED WITH PUGS QUANTITY READOUT PER SEQ. 13, V2.	
		19-049	MTPE	UFET	C14-205 CB12 - OPEN	*2
		19-050	MTPE	SPAD	PROCEED WITH DOOR INSTL PER T/S 8.2.8.2.1 THRU 8.2.8.2.7 EXCEPT 8.2.8.2.6. REPORT COMPLETION. ____ NR QC ____ NASA QC	*2
		19-051	MTPE	SLMP	PANEL 5 C/W MN A CB - CLOSE 005C052 C/W MN B CB - CLOSE 005C053	
		19-052	MTPE	SCMP	PANEL 2 C/W PWR SW - 1 RESET MASTER ALARM STATUS C/W LITES	
		19-053	MTPE	SPAD	PROCEED WITH THE FOLLOWING T/S.. A. 8.2.9.1.1 B. 8.2.9.1.3 THRU 8.2.9.1.7 C. 8.2.9.2.1 THRU 8.2.9.2.10 D. 8.2.9.3.1 THRU 8.2.9.3.5 E. 8.2.9.3.8 F. 8.2.9.5.1	
		19-054	MSTC	CVTS	1. CLEAR TO DISCONNECT LN2 TRAILER FROM S14-009. 2. CHANGE SMDPS TO 2 SW/1 VLV.	
		19-055	MPUG	MTPE	REQUEST PUGS DISCONNECTION, A34-388 REMOVAL AND CSM 10 INSTALLATION.	
		19-056	MTPE	SPAD	INSTALL CSM10 PER T/S 8.2.9.3.7. REPORT COMPLETION. ____ NR QC ____ NASA QC	
-66 00		19-056A	MTPE	CSGS	PROCEED WITH SEQ 39-001,2V2. REPORT COMPL.	*2
		19-056B	KSTC	MSTC	HAVE SPAD SUPPORT 603 SLA CUTTER (B) AND 603 QUAD 4 PLATFORM PAD REMOVAL AND PERFORM FINAL INSP. REPORT COMPLETION.	*2
		19-056C	MTPE	SPAD	REMOVE XA603 CUTTER (B) PER T/S 8.2.9.4 AND XA603 QUAD 4 INTERNAL SLA PADS PER T/S 8.2.10.4.1B. PERFORM FINAL INSPECTION PER T/S 8.2.9.4.6. REPORT COMPLETION. ____ NR QC ____ NASA QC	*2

5 00	19-057	MTPE	MECS	PERFORM EVAP WICK WETTING PER SEQ. 06, V2.	
	19-057A	MTPE	SPAD	SUPPORT THE PUBLIC HEALTH SERV REP IN OBTAINING MICROBIOL SAMPLES OF INTERIOR SLA AT XA603 LEVEL. REPORT COMPLETION.	NR QC / NASA QC *2
	19-057B	KSTC	MSTC	HAVE SPAD INSTALL PENETRATION COVERS D5 THRU D8 (GHE SERV).	*2
	19-057C	MTPE	SPAD	INSTALL D8 PER T/S 8.2.10.4.5. REPORT COMPLETION.	NR QC / NASA QC *2
-64 30 112	19-058	MTPE	CTSC	VERIFY LH2 DEWAR TOPOFF AND SAMPLING STARTED.	
-64 00	19-058A	MSTC	KSTC	603 QUAD 4 PADS HAVE BEEN REMOVED AND FINAL INSPECTION COMPLETE. CLEAR TO REMOVE PLATFORMS.	*2

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TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-61 05		19-059	CVTS	MSTC	Q-BALL POWER COMING ON IN 5 MINUTES.	
-61 00		19-060	CVTS	MSTC	SMDPS WILL BE IN 1 SW/1 VLV MODE FOR 2 HRS 30 MINUTES.	
-60 30		19-061	MTPE	CTSC	VERIFY LH2 DEWAR TOPOFF AND SAMPLING CMP. PROCEEDING WITH LO2 DEWAR TOPOFF AND SAMPLING.	
-60 00		19-062	MTPE	SLFC	PERFORM T/S NO. 34, VOL 2.	
-59 35		19-063	CVTS	MSTC	MONITOR CH 121 FOR Q-BALL SIM CMD AT T-59 30. SUPPLY READINGS TO VUMS ON CH 148.	
					NOTE MTPE WILL MONITOR CH 121 AND GIVE MARK TO SCDR AND MREC ON CH 222 FOR Q-BALL CAL.	
		19-064		SCDR	PANEL 1 LV ALPHA/SPS PC IND PCNT -----	
				MREC	ANGLE OF ATTACK PCNT LS0200 -----	
					NOTE MTPE GIVE READING TO VUMS ON CH 148.	
-59 05		19-065	CVTS	MSTC	Q-BALL POWER OFF IN 5 MINUTES.	
-58 30		19-066	CVTS	MSTC	SMDPS IN 2 SW/1 VLV MODE.	
		19-067	MTPE	CTSC	PROVIDE MOISTURE SAMPLING EQUIP ON 4A IN 30 MIN. PROVIDE GH2 AND GO2 SAMPLE CONTAINERS ON 4A IN 30 MIN.	
-58 00		19-068	MTPE	SPAD	PREPARE FOR W/R RETRACT IN 1 HOUR	
		19-068A	MTPE	CSGS	PROCEED WITH SEQ 39-001,2V2. REPORT COMPL.*2	
		19-069	MTPE	SLMP	PANEL 226 VERIFY COAS/TUNNEL MN B CB - OPEN RUN/EVA/TGT AC 2 CB - CLOSE	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		19-069				
					WARNING DO NOT LOOK DIRECTLY AT SPOTLITE.	
		19-070	MTPE	SPAD	OPEN SPOT LIGHT DOOR WITH A SCREWDRIVER.	
		19-071	MTPE	SLMP	PANEL 2 RNDZ/SPOT SW - SPOT	
		19-072	MTPE	SCET	VERIFY SPOT LITE ON	
		19-073	MTPE	SLMP	PANEL 226 LTG COAS/TNL MN A - CLOSE PANEL 2 RNDZ/SPOT SW - RNDZ	
		19-074	MTPE	SCET	VERIFY RNDZ LITE FLASHING PANEL 2	
		19-075	MTPE	SLMP	RNDZ/SPOT SW - OFF RUN/EVA SW - ON	
		19-076	MTPE	SCET	VERIFY 8 EA DOCKING LITES AND EVA LITE ON	
		19-077	MTPE	SLMP	PANEL 2 RUN/EVA SW - OFF	
		19-078	MTPE	SCET	VERIFY ALL LITES OFF	
		19-079	MTPE	SLMP	PANEL 226 RUN/EVA/TGT AC 2 CB - OPEN RUN/EVA/TGT AC 1 CB - CLOSE PANEL 2 RUN/EVA SW - ON	
		19-080	MTPE	SCET	VERIFY 8 EA DOCKING LITES AND EVA	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		19-080			LITE ON.	
		19-081	MTPE	SLMP	PANEL 2 RUN/EVA SW - OFF	
		19-082	MTPE	SCET	VERIFY ALL LITES OFF	
		19-083	MTPE	SLMP	PANEL 226 RUN/EVA/TGT AC 1 CB - OPEN COAS/TNL/RNDS/SPOT MN A CB - OPEN	
		19-084	MTPE	SPAD	CLOSE SPOTLITE DOOR	
		19-085	MTPE	SLFC	VERIFY COMPLETION OF T/S NO. 34, VOL 2.	NR QC NASA QC
		19-086	MTPE	MLFC	PROCEED WITH GSE PWR UP.	
-57 00		19-087	MSTC	CLTC	1. HAVE SA-9 HOOD RETRACTED.	
		19-088	MLFC	MTPE	GSE PWR UP CMP. PROCEEDING WITH LO2 AND LH2 PAD PRESS AND MOISTURE VERIF.	
		19-089	MTPE	BOTV	VERIFY/TURN ON THE FOLLOWING CAMERAS. AND FOCUS ON APPROPRIATE AREA. CAMERA = 53 CRYO PODS 54 LO2 VALVE BOX 55 H2 VALVE BOX 47 S14-032 -22' LEVEL 46 S14-026 -22' LEVEL 49 PAD OXIDIZER SIDE 48 PAD FUEL SIDE	
-56 30		19-090	MTPE	CTSC	VERIFY LO2 DEWAR TOPOFF AND SAMPLING CMP.	

-56 00	19-090A	KSTC	MSTC	HAVE SPAD SEND CREW TO REMOVE 525 CUTTERS (C & F), 525 QUAD 4 PADS AND INSPECT AREA. REPORT COMPL.		*2
	19-090B	MTPE	SPAD	IN (XA525) AREA, REMOVE CUTTERS (C & F) PER T/S 8.2.9.4. REMOVE XA525 QUAD 4 SLA INTERNAL PADS PER T/S 8.2.10.4.1B. PERFORM INSPECTION PER T/S 8.2.9.4.6. REPORT COMPLETION.	NR QC	NASA QC *2
	19-091	MSIC	CVTS	VERIFY CPSS CLEARANCE TO TRANSPORT LH2 AND LO2 DEWARS TO LC 39.		
	19-092	MTPE	SLFC CTSC	PROCEED TO LC 39 WITH LH2 AND LO2 DEWARS. REPORT ARRIVAL AT PAD APRON.		
-55 00	19-093	SLFC	MTPE	LH2 AND LO2 DEWARS AT PAD APRON REQUEST CLEARANCE OF NON-ESSENTIAL PERSONNEL FOR TRANSFER OF LH2 DEWAR		

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TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		19-093			TO 4A LEVEL AND LO2 DEWAR TO +12 FT LEVEL.	
					NOTE ESSENTIAL PERSONNEL AT PAD APRON/+12 FT LEVEL FOR TRANSFER OF LH2 DEWAR TO LEVEL 4A IS LOCAL CLEAR AS DETERMINED BY SYSTEM SAFETY. SLFC (1) NASA SLFC (1) * NR GSE MECH TECHS (2) SNRS (1) * SNQC (1) PVSI (1) VEHICLE DRIVERS (2)	
					NOTE ESSENTIAL PERSONNEL AT LEVEL 4A FOR HANDLING/INSTALLATION OF DEWAR IS AS FOLLOWS.. SLFC (1) SNQC NASA SLFC (1) * SGQC SOMD PVSS SHFD SNRS * * ROVING AS REQ'D	
		19-094	MSTC	CVTS	1. CLEAR CONTROL AREA FOR LH2 DEWAR TRANSFER TO 4A AND FOR LO2 DEWAR TRANSFER TO +12 FT LEVEL. 2. CONFIGURE ELEVATOR FOR TRANSFER. 3. VERIFY CPSS CLEARANCE FOR TRANSFER. 4. VERIFY HAZARD MONITOR SYSTEM ACTIVE. 5. SEND SEHZ TO CH 222.	
-54	30	19-094A	MTPE	SLFC	PROCEED WITH LH2 DEWAR TRANSFER. NO PERSONNEL WILL ACCOMPANY DEWAR ON THE ELEVATOR. REPORT WHEN CLEAR OF ELEVATOR AND ON CLAMSHELL.	*2
		19-094B	SLFC	MTPE	LH2 DEWAR TRANSFER COMPLETE. PROCEEDING WITH DEWAR INSTALLATION TO S14-132 FDS PER TCP-K-10027. READY TO PROCEED WITH LO2 DEWAR TRANSFER TO +12 FT LEVEL.	*2
		19-049C	MTPE	SLFC	PROCEED WITH LO2 DEWAR TRANSFER. NO PERSONNEL WITH ACCOMPANY DEWAR ON ELEVATOR. REPORT WHEN DEWAR IN PLACE ON +12 FT LEVEL.	*2

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		19-095	KSTC	MSTC	HAVE SPAD STANDBY TO ASSIST LM PERSONNEL DURING SLA CUTTER AND PROTECTIVE PAD REMOVAL.	*1
		19-095A	KSTC	MSTC	HAVE SPAD SUPPORT SLA CUTTER (G) REM.	*2
		19-095B	MTPE	SPAD	IN XA603 AREA, REMOVE SLA CUTTER (G) PER T/S 8.2.9.4. REPORT COMPLETION.	
					NR QC / NASA QC	*2
-55 45		19-096	MTPE	CTSC	SECURE ELEVATORS FROM DEWAR TRANSFER.	
		19-097	MLFC	MTPE	DEWAR INSTALL COMPL. REQUEST CLEARANCE TO PROCEED WITH LH2 SYS OPERATIONS.	
		19-097A	MSTC	CVTS	VERIFY CPSS CLEARANCE TO FLOW GH2.	
		19-097B	MTPE	MLFC	CLEAR TO PROCEED WITH LH2 SYS PURGING & SAMPLING.	
-54 45		19-098	MTPE	SPAD	VERIFY HATCH AREA BUILD UP COMPLETE AND READY FOR HOOD RETURN.	
		19-099	MTPE	CLTC	HAVE SA-9 HOOD EXTENDED.	
		19-100			(DELETED)	
		19-101	MTPE	CTSC	1. CHANGE MOISTURE SAMPLING EQUIPMENT H/U IN 30 MIN. 2. INITIATE VIDEO RECORDING OF CAMERAS 53, 55.	
-52 00		19-102	MSTC	KSTC	525 PLATFORM QUAD 4 PAD REMOVAL AND AREA INSPECTION IS COMPLETE. PROCEED WITH PLATFORM REMOVAL.	*2
-51 00		19-103	MLFC	MTPE	1. PRESSURIZATION PREPS COMPLETE 2. FUEL CELL PRESSURIZATION CYCLE IN PROGRESS.	
		19-104	MTPE	MECS	MONITOR SURGE TANK PRESS AND HAVE SCMP CLOSE O2 SM SUPPLY VALVE WHEN TANK PRESS REACHES 350 PSIA.	
		19-105	MTPE	SCMP	PANEL 352 VERIFY/POSITION.. POT TK IN VLV - CLOSE WASTE TK IN VLV - AUTO	*1
		19-106	MLFC	MTPE	SEND MECS TO CH 227.	
		19-107	MTPE	SNQC SGQC	PROCEED WITH CRYOLOADING INSPECT PER T/S 8.2.9.3.6	*1
		19-108	MSTC	CVTS	VERIFY CPSS CLEARANCE TO PRESS GN2 SPHERE TO 1485 PSIG.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARK
		19-109	MTPE	SPAD	STAND CLEAR OF SM SECTOR 4 UNTIL PRESSURE STABILIZE.	
		19-109A	KSTC	MSTC	HAVE SPAD SEND CREW TO REMOVE 603 PLATFORM PADS (EXCEPT +Z QUAD) AND PERFORM INSPECT. REPORT COMPLETION. NR QC NASA QC	*2
		19-109B	MTPE	SPAD	IN XA603 AREA, REMOVE SLA INTERNAL PADS PER T/S 8.2.10.4.1B AND INSPECT PER T/S 8.2.9.4.6. REPORT COMPLETION. NR QC NASA QC	*2
-50 00		19-110	MLFC	MTPE	1. FUEL CELL PRESS CYCLE AND VERIFICATION OF ECS WATER TANKS COMPLETE. 2. PROCEEDING WITH FUEL CELL HEATING CYCLE.	
		19-111	MTPE	MLFC	CLEAR TO PRESSURIZE GN2 SPHERE.	
		19-111A	MTPE	CSGS	PROCEED WITH SEQ 39-001,2 V2. REPORT COMPL	*
-49 00		19-112	MTPE	SPAD SNQC SGQC	1. COORDINATE WITH GAEC AND PERFORM SLA INTERIOR INSPECT PER T/S 8.2.9.4.6 AS WORKSTANDS ARE BEING REMOVED FROM SLA ON AN "ON CALL" BASIS. ~~2. PERFORM T/S 8.2.9.4.7 (SLA UMB LANYARD)~~ 3. COORDINATE WITH GAEC SFME AND PROCEED WITH SLA CUTTER REMOVAL PER T/S 8.2.9.4.1 THRU 8.2.9.4.5 REPORT COMPLETION NR QC NASA QC	
		19-112A	MTPE	SPAD	PERFORM T/S 8.2.9.4.7 (SLA UMB LANYARD. REPORT COMPLETION. NR QC NASA QC	*2
-48 00		19-112B	MSTC	KSTC	PAD REMOVAL AND 603 AREA INSPECTION COMPLETE. PROCEED WITH PLATFORM REMOVAL.	*2
-47 30		19-113	MLFC	MTPE	1. FUEL CELL HEATING CYCLE COMPLETE 2. PROCEEDING WITH CALIBRATION AND LOADING. 3. REQUEST MEPS ISOLATE BUS B FOR FUEL CELL CALIBRATION.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		19-114	MTPE	ALL	BUS B WILL BE ISOLATED FOR FUEL CELL CALIBRATION. GIVE STATUS FOR BUS B ISOLATION MSCS ----- MECS ----- MLFC ----- MEPS ----- MSPS ----- MRCS ----- MREC ----- MGNS ----- MCSE ----- NOTE MLFC PROCEEDS WITH FC CALIBRATION	
		19-115			-- BUS B ISOLATION --	
		19-116	MTPE	MEPS	ISOLATE BUS B LOAD	
		19-117	MEPS	UFET	C14-205 CB15 - CLOSED CB16 - CLOSED CB15, 16 CLOSED LITES ON	
		19-118	MEPS	MEPE	PS A BAT ENABLE - OFF PS B BAT ENABLE - OFF	*2 KC7630 R545 KC7634 R075

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		19-119			(DELETED)	
		19-120	MEPS	SLMP	PANEL 5 *2	
					NON ESS BUS SW - MNA	005S009
		19-121	MEPS	ALL	POWER WILL MOMENTARILY BE OFF AC BUS 2 WHILE SWITCHING INVERTERS FOR BUS B ISOLATION	
		19-122	MEPS	SLMP	PANEL 2	
					CW NORMAL SW - NORMAL	002S007
		19-123	MEPS	SLMP	PANEL 3	
					AC BUS RESET SW - OFF	
					INV 3 SW - MNA	003S059
					INV 2 AC BUS 2 SW - OFF	003S065
					INV 3 AC BUS 2 SW - (ON-UP)	003S066
					HRS MIN SEC	
		19-124	MEPS	SLMP	PANEL 3	
					INV 2 SW - OFF	003S058
					AC BUS 2 RESET SW - RESET, REL	003S067
					MASTER ALARM LITE ON	
					MASTER ALARM P/B - RESET	
			MEPE		HRS MIN SEC	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		19-125	MEPS	SLMP	PANEL 2		
					AC BUS 2 LT OUT		
		19-126	MEPS	MEPE	BUS 1 PH A VAC (P1-18L) -----	CC0200	115 +/- 5
					BUS 2 PH A VAC (P1-18R) -----	CC0203	115 +/- 5
		19-126A	MEPS	MEPE	BUS A FLTR ON/OFF - OFF	KC7068	R075
					BUS B FLTR ON/OFF - OFF	KC7069	R075
				MEPE	GR PWR FLTR BANK A ON LITE OFF	GC5075	
					GR PWR FLTR BANK B ON LITE OFF	GC5076	*2

NOTE

IN THE FOLLOWING STEPS, PLACE CIRCUIT BREAKERS TO OPEN AND LOG SWITCHING ACTION AS ''A'' (ACTION) OR ''V'' (VERIFY). CB'S OPENED WILL BE CLOSED AT COMPLETION OF FC CALIBRATION.

		19-127	MEPS	SLMP	PANEL 5		
					INST ESS MNB CB -----	005C020	
					ECS		
					POT H20 HTR MNB CB -----	005C027	
					XDUCER WASTE/POT H20 MNB CB -----	005C031	
					XDUCER PRESS GRP 1 MNB CB -----	005C033	
					XDUCER PRESS GRP 2 MNB CB -----	002C035	
					XDUCER TEMP MNB CB -----	005C037	
					SEC COOL XDUCER MNB CB -----	005C047	
					WASTE H20 URINE DUCT HTR MNB CB -----	005C051	
					C/W MNB CB -----	005C053	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		19-127			G/N		
					IMU MNB CB	005C057	
					IMU HTR MNB CB	005C059	
					COMPUTER MNB CB	005C061	
					OPTICS MNB CB	005C063	
					ECS		
					H20 ACCUM MNB CB	005C029	
					RAD CONT/HTR MNB CB	005C070	
					LM POWER 1 MNB CB	005C074	
					LM POWER 2 MNB CB	005C066	
			MEPS	SLMP	PANEL 275		
					FLT/PL MNB CB - OPEN	275C006	
					INV PWR 2 MNB CB - OPEN	275C002	
					INV PWR 3 MNB CB - OPEN	275C004	
		19-128	MEPS	SLMP	PANEL 225		
					CENTRAL TIMING EQUIP MNB CB	225C022	
					FLT BUS B CB	225C004	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		19-129	MEPS	SLMP	PANEL 226		
					FC2 PURGE CB -----	226C011	
					CRYO H2 HTR 2 CB -----	226C017	
					FC3 PURGE CB -----	226C012	
					CRYO 02 HTR 2 CB -----	226C019	
					LTG COAS/TUNNEL MNB CB -----	226C029	
					LTG FLOOD MNB CB -----	226C031	
			MEPS		HR ----- MIN ----- SEC -----		
		19-130	MEPS	SLMP	PANEL 229		
					EPS		
					GRP 1 MNB CB -----	229C027	
					GRP 2 MNB CB -----	229C029	
					GRP 3 MNB CB -----	229C031	
					GRP 4 MNB CB -----	229C033	
					GRP 5 MNB CB -----	229C035	
					UTILITY LEB CB -----	229C037	
					TIMERS MNB CB -----	229C041	
			MEPS		GND PS B ----- VOLTS (P1-3)	GC5028	29 +/- 2
					AMPS (P1-4) -----		5 MAX
		19-131	MEPS	UFET	C14-316 CB 1 THRU 24 - OPEN		
		19-132	MEPS	LPDS	A14-074 MAIN PWR 115 VAC SW - ON AC PWR ON LITE ON MAIN PWR 28 VDC SW - ON DC PWR ON LITE ON		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		19-133	MEPS	MEPE	PS B TO BUS B - OFF	KC7034 R101
		19-134	MEPS	MLFC	BUS B ISOLATION COMPLETE	
		19-135	MTPE	MEPE	GO TO CH 224 TO SUPPORT FUEL CELL OPERATIONS	
		19-136	MTPE	MEPS	CONFIGURE GND PS A & B BATTERY BACKUP UNITS FOR G&N SUPPORT.	*2
		19-137	MEPS	LPDS	C14-621 UNITS 1 & 2 VERIFY CHARGE LITES OFF VOLTMETER SEL SW - 24 DC PWR BATTERY CONDITIONER PANEL INCREASE CELL SELECTOR SWITCH TO THE LOWEST CELL POSITION WHICH GIVES A VOLTAGE INDICATION BETWEEN 29.5 AND 31.0 VDC. RECORD: CELL SEL._____,_____VDC.	*2
		19-138	MEPS	MTPE	GND PS A & B BATTERY BACKUP UNITS CONFIGURED FOR G&N SUPPORT.	*2
-47 00		19-138A	CVTS	MSTC	OIS & PHONES BEING DISCONNECTED FROM OIS FALLBACK TRAILERS.	*2
		19-139			(DELETED)	*2
		19-140	MLFC	MTPE	1. FC CALIBRATION COMPLETE 2. BUS B LOADS MAY BE REAPPLIED	
		19-141	MTPE	ALL	GIVE STATUS FOR REAPPLICATION OF BUS B LOADS. MSCS _____ MRCS _____ MECS _____ MREC _____ MLFC _____ MGNS _____ MEPS _____ MCSE _____ MSPS _____	
		19-142	MTPE	MEPS	PROCEED WITH REAPPLICATION OF BUS B LOADS	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		19-142			NOTE MEPS CLOSES CIRCUIT BREAKERS PREVIOUSLY OPENED DURING BUS B ISOLATION. (REF ''A'' ACTION IN BUS ISOLATION LOG).	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		19-143	MEPS	SLMP	PANEL 5		
					INST ESS MNB CB	005C020	
					ECS		
					POT H20 HTR MNB CB	005C027	
					XDUCER WASTE/POT H20 MNB CB	005C031	
					XDUCER PRESS GRP 1 MNB CB	005C033	
					XDUCER PRESS GRP 2 MNB CB	005C035	
					XDUCER TEMP MNB CB	005C037	
					SEC COOL XDUCER MNB CB	005C047	
					WASTE H20 URINE DUCT HTR MNB CB	005C051	
					C/W MNB CB	005C053	
					G/N		
					IMU MNB CB	005C057	
					IMU HTR MNB CB	005C059	
					COMPUTER MNB CB	005C061	
					OPTICS MNB CB	005C063	
					ECS		
					H20 ACCUM MNB CB	005C029	
					RAD CONT/HTR MNB CB	005C070	
					LM POWER 1 MNB CB	005C074	
					LM POWER 2 MNB CB	005C066	
					PANEL 275		
					FLT/PL MNB CB	275C006	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		19-143			INV PWR 2 MNB CB	275C002	

					INV PWR 3 MNB CB	275C004	

		19-144	MEPS	SLMP	PANEL 225		
					CENTRAL TIMING EQUIP MNB CB	225C022	

					FLT BUS B CB	225C004	

		19-145	MEPS	SLMP	PANEL 226		
					FC2 PURGE CB	226C011	

					CRYO H2 HTR 2 CB	226C017	

					FC3 PURGE CB	226C012	

					CRYO 02 HTR 2 CB	226C019	

					LTG COAS/TUNNEL MNB CB	226C029	

					LTG FLOOD MNB CB	226C031	

			MEPE		HR ----- MIN ----- SEC -----		
		19-146	MEPS	SLMP	PANEL 229		
					EPS		
					GRP 1 MNB CB	229C027	

					GRP 2 MNB CB	229C029	

					GRP 3 MNB CB	229C031	

					GRP 4 MNB CB	229C033	

					GRP 5 MNB CB	229C035	

					UTIL LEB CB	229C037	

					TIMERS MNB CB	229C041	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		19-146			PANEL 3	
					AC BUS 2 RESET SW - OFF INV 2 SW - MNB INV 3 AC BUS 2 SW - OFF INV 2 AC BUS 2 SW - (ON-UP)	
			MEPE		HR MIN SEC ----- ----- -----	
					PANEL 3	
					INV 3 SW - OFF	
					PANEL 3	
					MN BUS B RESET SW - RESET, REL AC BUS 2 RESET SW - RESET, REL	003S067
					MASTER ALARM LT - ON MASTER ALARM PB - RESET	
					PANEL 2	
					AC BUS 2 LT OUT	
		19-147	MEPS	SLMP	PANEL 5	
					NON ESS BUS SW - MNB	005S009
		19-147A	MEPS	LPDS	A14-074 SYS A 30, 40, 50 AMP SWS - DOWN(OFF) SYS B 30, 40, 50 AMP SWS - DOWN(OFF)	*2
		19-148	MEPS	MTPE	BUS B LOADS ARE REAPPLIED.	
-46	00	19-148A	MTPE	MGNS MGNR MGNL SCMP MNQC	PERFORM G&N ACTIVATION PER SEQ. 11V2, ON CH 215.	*2
					NOTE DO NOT PERFORM G&N ACTIVATION UNTIL AFTER BUS B LOADS ARE REAPPLIED.	*2

	19-149	MTPE	SLMP	PANEL 2 C/W NORMAL SW - ACK	
	19-150	MLFC	MTPE	FUEL CELL ACTIVATION COMPLETE CLEAR PERSONNEL FOR LH2 FLOW. LOADING PREPS IN PROGRESS	
	19-151	MTPE	SNQC SGQC	REPORT COMPLETION OF MSS-PAD INSPECT FOR CRYO LOAD PER T/S 8.2.9.3.6 ------ ------- NR QC NASA QC	
	19-152	MGNS	MTPE	REQUEST MACE PROVIDE UPLINK COMMAND FILE TAPE PRINTOUT (DYNAMES 4 AND 12) FOR GMT. -----	this is done at T-46 during CDDT and at T-21 during launch
-45 00	19-152A	KSTC	MSTC	LM CLEAR FOR D10 (-Z HATCH) INSTL.	*2
	19-152B	MTPE	CSGS	PROCEED WITH SEQ 39-002, 3V2. REPORT COMPL.	*2
-44 00	19-153	MGNS	MTPE	STANDBY POWER TEST COMPLETE.	

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TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		19-153			PROCEEDING WITH IMU OPER POWER ON. S/C LIGHTING NOT REQ'D FOR G AND C TESTS.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
-44 00		19-154	MTPE	SPAD	PERFORM ACCESS DOOR STATUS CHECK.	

NOTE

THE FOLLOWING REPRESENTS A SUMMATION OF ACCESS DOOR STATUS. ''ON'' MEANS FLIGHT DOOR INSTALLED WITH MOUNTING. ''OFF'' INDICATES DOOR IS OFF FOR REQUIRED ACCESS, CABLE PENETRATION, HOSE PENETRATIONS, ETC. WHEN CABLES AND HOSES ARE CONNECTED THE AREA IS PROTECTED WITH PLASTIC TO MINIMIZE PROBLEMS DUE TO LEAKS OR SPILLS.

COMMAND MODULE	DESIRED	ACTUAL
CM2	ON	-----
CM8	ON	-----
CM10	ON	-----
CM11	ON	-----
CM13	ON	-----
CM14	ON	-----
CM15	ON	-----
CM17	ON	-----
CM19	ON	-----
CM23	ON	-----
CM24	ON	-----

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		19-154			COMMAND SERVICE MODULE FAIRINGS		
					CSM1	ON	
					CSM2	ON	
					CSM3	ON	
					CSM4	ON	
					CSM5	ON	
					CSM6	ON	
					CSM7	OFF	
					CSM8	ON	
					CSM9	ON	
					CSM10	ON	
					CSM11	ON	
					SERVICE MODULE		
					SM1	ON	
					SM2	ON	
					SM3	OFF	
					SM4	OFF	
					SM5	OFF	
					SM6	OFF	
					SM7	OFF	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		19-155			SM8 (8 EA)	ON	
					SM9 (2 EA)	ON	
					SM10 (6 EA)	ON	
					SM11	OFF	
					SM12	OFF	
					SM13	OFF	
					SLA		
					C1	ON	
					C2	ON	
					C3	ON	
					C4	ON	
					D1	OFF	
					D2	OFF	
					D3	OFF	
					D4	OFF	
					D5	OFF	
					D6	OFF	
					D7	OFF	
					D8	OFF	
					D9	OFF	
					D10	OFF	
					D11	OFF	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		19-155			D12	OFF	
					D13	ON	
					D14	ON	
					D15	ON	
					D16	ON	
					+YII	ON	
					-ZI	ON	
					+ZIII	ON	
					-YIV	ON	

NOTE

FOLLOWING TIME IS FOR REFERENCE ONLY. BUS B ISOLATION WILL BE A FUNCTION OF COMPLETION OF HEATING CYCLE.

-45 15		19-155A	MGNS	MTPE	G AND N OPERATIONAL TEST COMPLETE.
		19-155B	MTPE	SPAD	RECONFIGURE PTC PER T/S 8.2.9.1.2 REPORT COMPLETION NR QC NASA QC

NOTE

AN OPERATING PTC MUST BE RECONNECTED TO PSA 45J2 WITHIN 15 MIN OF A S/C DC BUS FAILURE.

		19-155C	MGNS	MTPE	STARTING IMU PERFORMANCE TEST. REQUEST MINIMUM ACTIVITY IN S/C.

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMAR
-43 00		19-156	CVTS	MSTC	SMDPS INACTIVE FOR 30 MINUTES BUT AVAILABLE ON 30 SEC NOTICE.	
-42 30		19-157	CVTS	MSTC	SMDPS IS ACTIVE	
-41 30		19-158	MTPE	SPAD	REPORT COMPLETION OF FOLLOWING T/S..	
					A. 8.2.9.1.1 ------ ------- NR QC NASA QC	
					B. 8.2.9.1.3 THRU 8.2.9.1.7 ------ ------- NR QC NASA QC	
					C. 8.2.9.2.1 THRU 8.2.9.2.10 ------ ------- NR QC NASA QC	
					D. 8.2.9.3.1 THRU 8.2.9.3.5 ------ ------- NR QC NASA QC	
					E. 8.2.9.3.8 ------ ------- NR QC NASA QC	
					F. 8.2.9.5.1 ------ ------- NR QC NASA	
		19-158A	CVTS	MSTC	SILO 4 AIR COND BEING REMOVED.	*2
-41 00		19-159	MSTC	CVTS	1. CLEAR CONTROL AREA FOR CSM LH2 SERVICING. 2. VERIFY CPSS CLEARANCE TO START LH2 SERVICING. 3. CHANGE SMDPS FROM 2 SW 1 VLV TO 1 SW.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		19-160	MTPE	SPAD	CLEAR ALL NON-ESSENTIAL PERSONNEL FOR LH2 SERVICING. CLEAR TO 1100 FT.	

NOTE

FOLLOWING PERSONNEL REQUIRED ON STATION..

4A LEVEL	4C LEVEL	COMPT 1A	
SPAD	SCMP	LMDR	
SHFD	SLMP	LNQC	
SLHM	-22 FT. LEVEL	ROVING	
SSMT			
SNQC	SFET	PVSS	
SGQC	SPDS	SLFC (2)	
	SLHM	SLFC	
BENDIX	SLHT	(NASA)	
SAMPLERS(2)	SNQC	SNRS	*1

0 LEVEL	PAD APRON
SEHZ (2)	PNQC
	PLHM
	VEHICLE DRIVERS (2)

19-161	MSTC	NOTE - REVIEW EVACUATION PROCEDURE WITH SCMP, SLMP IN CASE GN2 DELUGE IS TURNED ON.
19-162	MSTC	1. SET UP VIDEO RECORDING AS REQUESTED BY MLFC FOR CRYOGENIC LOADING
		2. INITIATE VIDEO RECORDING

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		19-165			NOTE	
					DURING LH2 FLOW, SEHZ WILL MONITOR HYDROGEN DETECTION SYSTEM METERS AND INFORM MSTC OF ALL HYDROGEN INDICATIONS, SPECIFYING SENSOR I.D. AND (PERCENT GAS CONCENTRATION). SYSTEM SAFETY (PVSS) WILL VERIFY READINGS USING PORTABLE GAS DETECTOR. (A FOUR PERCENT CONCENTRATION OF HYDROGEN CONSTITUES AN EXPLOSIVE ATMOSPHERE). MSTC DIRECT SECURING OF LH2 FLOW UNDER CONDITIONS OF RAPID INCREASE IN H2 CONCENTRATION OR A REPORTED READING NEARING FOUR PERCENT AT ANY SENSOR. TIME PERMITTING, MSTC WILL CONFER WITH PVSS AND MLFC PRIOR TO DIRECTING ANY INTERRUPTION OF FLOW. MSTC WILL DIRECT USE OF THE GN2 DELUGE PURGE AS FOLLOWS..	
					1. CLEAR ALL PERSONNEL FROM MSS LEVELS 3 AND 4 AND OBTAIN CPSS VERIFICATION.	
					2. DIRECT CSAT TO TURN ON DELUGE PURGE. IN CASE OF FIRE IN THE SM DURING CRYOGENIC LOADING, MSTC WILL DIRECT USE OF THE SM DELUGE PURGE AS OUTLINED ABOVE. FIRE AND EMERGENCY PROCEDURES IN SECTION 5 WILL BE FOLLOWED. FIRE PROCEDURES ARE IN TCP-K-0209V2, LC-39.	
					3. FOR MINOR INTERNAL LEAKS, MSTC MAY ACCOMPLISH USE OF ECS GN2 PURGE BY DIRECTING CECS.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-40 00		19-164	CVTS	MSTC	CLEAR TO PROCEED WITH LH2 SERVICING SMDPS IS IN 1 SW MODE	*2
-		19-165	MTPE	MLFC	PROCEED WITH LH2 SERVICING.	*2
-37 00		19-166	MLFC	MTPE	1. LH2 LOADING IS COMPLETE AND DEWAR INERTED. PROCEEDING WITH DISCONNECT AND REMOVAL OF LH2 DEWAR. 2. REQUEST CLEARANCE OF NON-ESSENTIAL PERSONNEL FOR TRANSFER OF LO2 DEWAR TO 4A LEVEL	

NOTE

ESSENTIAL PERSONNEL AT +12 FT LEVEL FOR TRANSFER OF LO2 DEWAR TO LEVEL 4A IS AS FOLLOWS..

SLFC (1)
NASA SLFC (1) *
NR GSE MECH TECHS (2)
SNRS (1) *
SNQC (1)
PVSI (1)

NOTE

ESSENTIAL PERSONNEL AT LEVEL 4A FOR HANDLING/INSTALLATION OF DEWAR IS AS FOLLOWS..

SLFC (1)	SNQC
NASA SLFC (1) *	SGQC
SOMD	PVSS
SHFD	SNRS *

* ROVING AS REQ'D

	19-167	MSTC	CVTS	CLEAR CONTROL AREA FOR LO2 DEWAR TRANSFER TO 4A. VERIFY CPSS CLEARANCE FOR TRANSFER. CONFIGURE ELEVATORS FOR TRANSFER.
	19-168	MTPE	SLFC	PROCEED WITH LO2 DEWAR TRANSFER TO 4A LEVEL. NO PERSONNEL WILL ACCOMPANY DEWAR ON ELEVATOR.

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		19-169	MTPE	CTSC	MOISTURE SAMPLE SUPPORT REQD ON 4A IN 30 MIN.	
-36 45		19-170	SLFC	MTPE	LO2 DEWAR AT 4A LEVEL. PROCEEDING WITH FDS CONNECTIONS PER K-10027.	
-36 00		19-170A	MTPE	CSGS	PROCEED WITH SEQ 30-003V2. REPORT COMPL.	*2
-35 30		19-171	MLFC	MTPE	LO2 DEWAR INSTALL COMPLETE. PROCEEDING WITH LEAK CHECK AND PURGING.	
-34 30		19-172	MTPE	SPAD	CLEAR ALL NON-ESSENTIAL PERSONNEL FOR LO2 SERVICING. CLEAR TO 1100 FT.	

NOTE

FOLLOWING PERSONNEL REQUIRED ON STATION..

4A LEVEL	4C LEVEL		
SPAD	SCMP		
SOMD	SLMP	COMPT 1A	
SLOM		---	
SSMT			
SNQC	-22 FT. LEVEL	LMDR	
SGQC	---	LNQC	
BENDIX SAMPLES (2)	SLOM SPDS		*1
COMPT 1A	SLOT SFET		
---	SLFC		
LMDR	SNQC		
LNQC			

ROVING	PAD APRON
---	---
SLFC	PLOM
PVSS	PNQC
SNRS	VEHICLE DRIVERS
SLFC (NASA)	(2)

-34 00		19-173	MSTC	CVTS	1. VERIFY CPSS CLEARANCE TO START LO2 SERVICING	
		19-174	MLFC	MTPE	LO2 LK CK AND PURGE COMPL.	
		19-175	MTPE	MLFC	PROCEED WITH LO2 SERVICING.	
-32 00		19-176	MLFC	MTPE	1. LO2 LOADING IS COMPLETE PROCEEDING WITH LO2 TANK VENT SAMPLING	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-31 00		19-177	MLFC	MTPE	GAS SAMPLING COMPLETE.	
		19-178	MLFC	MTPE	REQUEST AREA CLEAR OF ALL PERSONNEL FOR LO2 AND LH2 TANK PRESSURIZATION.	*2
		19-179	MTPE	SCMP	PANEL 2 STATUS C/W LITES C/W PWR SW - OFF (CTR)	
		19-180	MTPE	SLMP	PANEL 5 C/W MN A CB - OPEN C/W MN B CB - OPEN	005C052 005C053
		19-181	MTPE	SCDR	PANEL 326 SM 02 SUPPLY VALVE - OPEN PANEL 8 RCS SM HTRS A MN B CB - OPEN C MN B CB - OPEN B MN A CB - OPEN D MN A CB - OPEN	
		19-182	MTPE	SPAD	CLEAR ALL PERSONNEL TO PAD PERIMETER.	
		19-183	MSTC	CVTS	1. SPACECRAFT PERSONNEL ARE CLEARING CONTROL AREA. 2. VERIFY CPSS CLEARANCE TO START LO2 AND LH2 TANK PRESSURIZATION TO FLIGHT PRESSURES.	
-30 30		19-184	CVTS	MSTC	CLEAR TO PROCEED WITH PRESSURIZATION.	*2
					WARNING LO2 - LH2 SYSTEM WILL BE PRESSURIZED TO GREATER THAN 50 PCT. DB.	
		19-185	MTPE	MLFC	PROCEED WITH LO2 AND LH2 PRESSURIZATION	
-30 00		19-186	MLFC	MTPE	1. PRESSURE STABILIZED FOR 5 MINUTES. 2. PAD MAY BE OPENED FOR NORMAL WORK. 3. PROCEEDING WITH GSE INERTING. 4. HAVE MACE REMOVE ADAP PROGRAM IF 0096.	*2
		19-187	MTPE	MACE	REMOVE ADAP PROGRAM IF 0096.	

	19-188	MSTC CVTS	1. CRYO TANK PRESS COMPLETE. 2. TANK PRESSURES STABILIZED.. 3. STARTING SURGE TANK PRESS. 4. CONTROL AREA MAY BE OPENED FOR NORMAL WORK EXCEPT CM INTERIOR. VERIFY WHEN OPEN. 5. CHANGE SMDPS TO 2 SW/1 VLV.	*2
	19-189	MTPE SPAD	HAVE SC PERSONNEL REPORT ON STATION.	*2
-29 C0	19-190	MTPE CSGS	PROCEED WITH REMOVAL OF ALL MOBILE EQUIPMENT AND PROTECTIVE SHELTER USED IN ACE AWARENESS MONITOR AND RECORDING ON 280 FT. LEVEL OF LUT. FEC (PRFI) MAY BE NOTIFIED THRU "CGIC" ON CH 251.	*2

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-28 00		20-000			COUNTDOWN OPERATIONS - LAUNCH	
		20-001	MSTC	CVTS	1. SURGE TANK PRESS COMPLETE. 2. CM INTERIOR MAY BE OPENED FOR NORMAL WORK. VERIFY WHEN OPEN.	*2 *2
		20-002			(DELETED)	*2
		20-003	MTPE	SLMP	PANEL 5 C/W MN A CB - CLOSE 005C052 C/W MN B CB - CLOSE 005C053	
		20-004	MTPE	SCMP	PANEL 2 C/W PWR SW - 1 RESET MASTER ALARM STATUS C/W LITES	
	222	20-005	KSTC	MSTC	HAVE SPAD PREPARE TO SUPPORT SLA PENETRATION CLOSEOUT AND SLA CUTTER REMOVAL ON AN ON CALL BASIS UNTIL SILO 3 OPENING.	
		20-006	MTPE	SPAD	PROCEED WITH THE FOLLOWING T/S.. A. 8.2.10.1.3.5. B. 8.2.10.2.1 C. 8.2.10.3.10 D. 8.2.10.4.1, 2, 3, 4, 5 E. 8.22.2	 *2 *1

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-27 30		20-007	MLFC	MTPE	1. FDS LINE INERTING COMPLETE 2. READY FOR CRYO GSE DISCONNECT. 3. PROCEEDING WITH GSE POWER DOWN. 4. READY FOR FACILITY GHE SUPPLY TO TRANSFER UNIT S14-032 TO BE CLOSED. 5. PROCEEDING WITH O2 AND H2 FAN CKS.	
		20-008	MSTC	CVTS	1. HAVE CTSC REMOVE GSE FROM PAD. COORDINATE WITH MSTC. 3. TERMINATE VIDEO RECORDING ON CAMERAS 53 AND 55.	
		20-008A	CVTS	MSTC	SILO 4 A/C BEING POWERED UP.	*2
		20-009	MTPE	MECS	PERFORM SUIT SEP SERVICING VERIFICATION PER SEQ. 06V2.	*1
		20-010			DELETED	*1
		20-011	MTPE	MECS	TAKE POTABLE WATER SAMPLES PER SEQ 06V2.	
		20-012	MTPE	CTSC	PROVIDE H20 SAMPLE SUPPORT ON LEVEL 4C	*1
		20-013	MTPE	MECS	TOPOFF POTABLE WATER TANK AND SECURE GSE PER SEQ 06V2.	
		20-014	MTPE	SPAD	1. PROCEED WITH CRYO SERVICING LINES DISCONNECT AND H2 DETECTOR REMOVAL PER 8.2.10.3.1 THRU 8.2.10.3.9, EXCEPT 8.2.10.3.7 AND 8.2.10.3.8 REPORT COMPLETION 2. DISCONNECT LO2 DEWAR PER TCP-K-10027.	NR QC / NASA QC
		20-015	MTPE	SPAD	CLOSEOUT SM CRYO DOORS PER T/S 8.2.10.3.11, 13.	NR QC / NASA QC
		20-016	MLFC	MTPE	GSE POWER DOWN COMPLETE.	
		20-017	MTPE	PGSM	COORDINATE CRYO GSE REMOVAL PER TCP-K-10027.	
		20-018	MEPS	SLMP	PANEL 5 MAIN BUS TIE BAT A/C SW - (ON - UP)	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-018			BAT B/C SW - (ON - UP)	
				MEPS	BATS ON MAIN BUSSES	
		20-019	MEPS	SLMP	PANEL 5 ECS RAD HTRS OVLD BAT A CB - CLOSE BAT B CB - CLOSE MAIN BUS TIE BAT A/C SW - OFF BAT B/C SW - OFF	
		20-020	MTPE	MECS	VERIFY RAD HEATER MOTOR SWT EVENT LITES OFF	
		20-021	MTPE	SPDS	C14-626 (PS 5) BUS B CB1 - OPEN CB2 - OPEN CB8 - OPEN CB9 - OPEN	
		20-022	MLFC	MTPE	TANK FAN CHECKS COMPLETE.	
		20-023	MTPE	SPAD	PROCEED WITH DISCONNECT OF MSS/PAD INTERCONNECT CABLES (NR ONLY, NOT GAEC) AND LINES PER T/S 8.2.10.6.1. REPORT COMPLETION NR QC NASA QC	
		20-024	MTPE	SPAD	DISCONNECT GSE ACCESS CONNECTORS J17, J18, J19, J20, PER T/S 8.2.10.3.7 INST CSM 8 PER T/S 8.2.10.3.8. DISCONNECT C14-368 PER T/S 8.2.10.6.9 PERFORM T/S 8.2.10.3.12.	
		20-025	MTPE	SNQC	REPORT VERIF. OF PREVIOUS SEQ. COMPLETION. NR QC NASA QC	
-25	30	20-026	MSTC	CVTS	READY TO DISCONNECT MSS/PAD GN2	
-24	05	20-027	CVTS	MSTC	VERIFY CMD DECODER OFF	
-24	00	20-028	MTPE	SPAD	REMOVE CM INTERIOR PROTECTIVE COVER PER T/S 8.2.10.1.1 REPORT COMPLETION. NR QC NASA QC	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-029	MGNS	MTPE	IMU PERFORMANCE TEST COMPLETE.	
		20-030	MTPE	MSCL MSCR	RECORDER 17 1/4 2/X 3/1 4/X 5/3 6/1 7/3 8/1 RECORDER 19 1/4 2/4 3/1 4/X 5/3 6/1 7/3 8/1	
					CAUTION RCS ENGINES ARE CONNECTED. AUTO RCS SELECT SWITCHES (16), ON PANEL 8 SHALL REMAIN OFF UNTIL AFTER PRIME CREW INGRESS.	
		20-031	MTPE	SCDR	PANEL 8	
					SCS TVC AC1 CB - CLOSE	008C055
					SCS AC1 CB - CLOSE	008C009
					SCS AC2 CB - CLOSE	008C010
					SCS ECA/TVC AC2 CB - CLOSE	008C054
					SCS DIRECT ULL	
					MN A CB - OPEN	008C072
					MN B CB - OPEN	008C073
					SCS CONTR/DIRECT	
					1 MN A CB - OPEN	008C013
					1 MN B CB - OPEN	008C014
					2 MN A CB - OPEN	008C070
					2 MN B CB - OPEN	008C071
					A/C ROLL MN A CB - OPEN	008C015
					MN B CB - OPEN	008C016
					B/D ROLL MN A CB - OPEN	008C017
					MN B CB - OPEN	008C018
					PITCH MN A CB - OPEN	008C019
					MN B CB - OPEN	008C020
					YAW MN A CB - OPEN	008C021
					MN B CB - OPEN	008C022
					ORDEAL AC2 CB - CLOSE	008C065
					ORDEAL MNB CB - CLOSE	008C064
					SCS CONTR/AUTO MNA CB - CLOSE	008C074
					SCS CONTR/AUTO MNB CB - CLOSE	008C075
					SCS LOGIC BUS 1/2 MNA CB - CLOSE	008C063
					SCS LOGIC BUS 3/4 MNA CB - CLOSE	008C023
					SCS LOGIC BUS 1/4 MNB CB - CLOSE	008C062

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		20-031			SCS LOGIC BUS 2/3 MNB CB - CLOSE	008C024	
					SCS SYS MNA CB - CLOSE	008C011	
					SCS SYS MNB CB - CLOSE	008C012	
					EMS MNA CB - CLOSE	008C052	
					EMS MNB CB - CLOSE	008C053	
					SPS PITCH 1 BAT A CB - OPEN	008C031	
					SPS PITCH 2 BAT B CB - OPEN	008C032	
					SPS YAW 1 BAT A CB - OPEN	008C033	
					SPS YAW 2 BAT B CB - OPEN	008C034	
			MTPE	SCDR	PANEL 7		
					FDAI/GPI PWR SEL - OFF	007S003	
					SCS ELEC PWR SEL - ECA	007S005	
					BMAG 1 PWR SEL - OFF	007S006	
					BMAG 2 PWR SEL - OFF	007S007	
					SCS TVC SERVO PWR 1 SW - OFF	007S008	
					SCS TVC SERVO PWR 2 SW - OFF	007S009	
					SCS LOGIC PWR 2/3 SW - ON (UP)	007S010	
					SCS SIG COND DR BIAS PWR 1 SW - AC1	007S011	
					SCS SIG COND/DR BIAS PWR 2 SW - AC2	007S012	
			MTPE	SCDR	PANEL 7		
					FDAI/GPI PWR SEL - BOTH	007S003	
		20-032	MTPE	MSCL	RECORD SCS NULL VOLTAGE FOR ENGINEERING INFORMATION ONLY.		
					ROLL AT ER DEG. (P17-2) -----	CH3502	
					PITCH AT ER DEG. (P17-2) -----	CH3500	
					YAW AT ER DEG. (P17-2) -----	CH3501	
					ROLL RATE DG/S (P17-3) -----	CH3505	
					PITCH RATE DG/S -----	CH3503	
					YAW RATE DG/S (P17-3)	CH3504	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-033	MTPE	SCDR	PANEL 1	
					TRANS CONT PWR SW - OFF	001S066
					ROT CONTR PWR	
					NORM 1 SW - OFF	001S064
					NORM 2 SW - AC/DC	001S065
					DIRECT 1 SW - OFF	001S013
					DIRECT 2 SW - OFF	001S067
					SC CONT SW - CMC	001S018
				MGNR	G/N AP CONTROL LITE ON	
		20-034	MTPE	MSCR	SCS CONT MODE LITE OFF	CH3607
					GYRO 1 SMRD LITE ON	CH3623
					GYRO 2 SMRD LITE ON	CH3624
					ATT DB MIN LITE ON	CH3588
					ROLL BMAG RATE 2 LITE ON	CH3636
					PITCH BMAG RATE 2 LITE ON	CH3639
					YAW BMAG RATE 2 LITE ON	CH3642
					LIMIT CYCLE ON LITE OFF	CH3606
-23	15	20-035	MTPE	MGNR	K148 INSERT	
					V48	
					E	
					V24	
					E	
					31013	
					E	
					11111	
					E	
					V34	
					E	
				MGNR	CSM/S-IVB DAP LITE ON	
		20-036	MTPE	MGNR	K148 INSERT	
					V46	
					E	
				MGNR	IMU ERR CTR ENABLE LITE ON	
		20-037	MSTC	CVTS	CSM READY FOR S/C CONTR OF SAT ATTITUDE COMMAND CHECKS	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-038	MSTC	CUSP CUCR CUSW C4FC	VERIFY READY FOR S/C CONTR OF SAT ATT CMD CKS.	
		20-039	MSTC	CUSW	ISSUE OCTAL 031 (S/C CONTROL OF SATURN INHIBIT-OFF)	
		20-040	MSTC	SCDR	LV GUID SW - CMC	
			MGNR		S/C CONTR SAT LITE ON SAT TAKOVER ENABLE LITE ON	
		20-041	MSTC	CUSP	VERIFY S/C CONTROL INDICATION ON	
		20-042	MSTC	SCDR	RHC 2 - ARMED	
		20-043	MSTC	CUSP	SIVB COAST MODE SW - ON	
		20-044	MSTC	SCDR	RHC2 - (+) ROLL SOFT STOP	
		20-045	MSTC	CUCR C4FC	VERIFY PLUS ROLL COMMAND, I-IV AND III-II APS FIRING	
		20-046	MSTC	SCDR	RHC2 - (-) ROLL SOFT STOP	
		20-047	MSTC	CUCR C4FC	VERIFY MINUS ROLL COMMAND, I-II AND III-IV APS FIRING	
		20-048	MSTC	SCDR	RHC2 - (+) PITCH SOFT STOP	
		20-049	MSTC	CUCR C4FC	VERIFY PLUS PITCH COMMAND, I-P APS FIRING	
		20-050	MSTC	SCDR	RHC2 - (-) PITCH SOFT STOP	
		20-051	MSTC	CUCR C4FC	VERIFY MINUS PITCH COMMAND, III-P APS FIRING	
		20-052	MSTC	SCDR	RHC2 - (+) YAW SOFT STOP	
		20-053	MSTC	CUCR C4FC	VERIFY PLUS YAW COMMAND, I-II AND III-II APS FIRING.	
		20-054	MSTC	SCDR	RHC2 - (-) YAW SOFT STOP	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-055	MSTC	CUCR C4FC	VERIFY MINUS YAW COMMAND, I-IV AND III-IV APS FIRING	
		20-056	MSTC	SCDR	RHC 2 - NEUTRAL, THEN LOCK.	
		20-057	MSTC	CUSW	ISSUE IU OCTAL 051	
		20-058	MSTC	CUSP	VERIFY S/C CONTROL INDICATION OFF	
		20-059	MSTC	CUSP	SIVB COAST MODE SW - OFF	
		20-060	MSTC	SCDR	LV GUID. SW - IU	
		20-061	MSTC	CUSP CUCR CUSW C4FC	TEST COMPLETE. RETURN TO ASSIGNED CHANNELS	
		20-062	MTPE	SCDR	PANEL 1	
					TRANS CONT PWR SW - OFF	001S066
					ROT CONTR PWR	
					NORM 1 SW - OFF	001S064
					NORM 2 SW - OFF	001S065
					DIRECT 1 SW - OFF	001S013
					DIRECT 2 SW - OFF	001S067
					SC CONT SW - SCS	001S018
					PANEL 7	
					FDAI/GPI PWR SEL - OFF	007S003
					BMAG PWR	
					1 SEL - OFF	007S006
					2 SEL - OFF	007S007
					SCS	
					TVC SERVO PWR	
					1 SW - OFF	007S008
					2 SW - OFF	007S009
					ELEC PWR SEL - OFF	007S005
					LOGIC PWR 2/3 SW - OFF	007S010
					SIG COND/DR BIAS PWR	
					1 SW - OFF	007S011
					2 SW - OFF	007S012

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-062			PANEL 8	
					SCS	
					TVC AC 1 CB - OPEN	008C055
					AC 1 CB - OPEN	008C009
					AC 2 CB - OPEN	008C010
					ECA/TVC AC2 CB - OPEN	008C054
					DIRECT ULL	
					MN A CB - OPEN (GUARDED)	008C072
					MN B CB - OPEN (GUARDED)	008C073
					CONTR/DIRECT	
					1 MN A CB - OPEN	008C013
					1 MN B CB - OPEN	008C014
					2 MN A CB - OPEN	008C070
					2 MN B CB - OPEN	008C071
					A/C ROLL	
					MN A CB - OPEN	008C015
					MN B CB - OPEN	008C016
					B/D ROLL	
					MN A CB - OPEN	008C017
					MN B CB - OPEN	008C018
					PITCH	
					MN A CB - OPEN	008C019
					MN B CB - OPEN	008C020
					YAW	
					MN A CB - OPEN	008C021
					MN B CB - OPEN	008C022
					ORDEAL	
					AC 2 CB - OPEN	008C065
					MN B CB - OPEN	008C064
					SCS	
					CONTR/AUTO	
					MN A CB - OPEN	008C074
					MN B CB - OPEN	008C075
					LOGIC BUS	
					1/2 MN A CB - OPEN	008C063
					3/4 MN A CB - OPEN	008C023
					1/4 MN B CB - OPEN	008C062
					2/3 MN B CB - OPEN	008C024
					SYS	
					MN A CB - OPEN	008C011
					MN B CB - OPEN	008C012
					EMS	
					MN A CB - OPEN	008C052
					MN B CB - OPEN	008C053
					SPS	
					PITCH 1 BAT A CB - OPEN	008C031
					PITCH 2 BAT B CB - OPEN	008C032
					YAW 1 BAT A CB - OPEN	008C033
					YAW 2 BAT B CB - OPEN	008C034

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-062	MTPE	ALL	SCS DEACTIVATION COMPLETE	
		20-063	MSTC	HFLT	MONITOR CMC CLOCK ALIGN ON CH215	
		20-064	MTPE	MGNS	PERFORM CMC CLOCK ALIGN PER SEQ 11V2 ON CH215.	
		20-065	MGNS	MTPE	CMC CLOCK ALIGN COMPLETE. REQUEST MACE PROVIDE UPLINK COMMAND FILE PRINTOUT (DYNAMES 4 AND 12) FROM 21 55 E TO 21 57 E ~~GMT~~	
		20-066	MTPE	MGNS	PROCEED WTIH GYRO COMPASSING PER SEQ 11, V2.	
-23 05		20-067	CVTS	MSTC	Q BALL POWER COMING ON IN 5 MINUTES.	
-22 00		20-068			NOTE WEST MSS ELEVATOR LOCKED OUT UNTIL T-21 00.	
-21 35		20-069	CVTS	MSTC	MONITOR CH 121 FOR Q BALL SIM CMD IN 5 MIN. PROVIDE READOUTS TO VUMS ON CH 148.	
					NOTE MTPE WILL MONITOR CH 121 AND GIVE MARK TO SCDR AND MREC ON CH 222.	
				SCDR	PANEL 1 LV ALPHA/SPS PC IND ____ PCNT	
				MREC	ANGLE OF ATTACK (P11-8) ____ PCNT	LS0200

22 13 E. 22 16 E

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-069			NOTE MTPE GIVE READING TO VUMS ON CH 148.	
-21 05		20-070	CVTS	MSTC	1. Q BALL POWER OFF IN 5 MINUTES. 2. REQUEST CLEARANCE TO W/R FOR 3 FILM CAMERA CHECKERS FOR 15 MINS. NOTE SILO 4 AIR CONDITIONING GOING OFF AT APPROX T-20 00.	
		20-071			LUT WALKDOWN STARTING (L/V)	
-21 00		20-071A	KSTC	MSTC	SLA +Z PLATFORMS XA 603 LEVEL TO BE REMOVED. HAVE SPAD SUPPORT.	
		20-071B	MTPE	SPAD	IN XA 603 +Z AREA, REMOVE SLA INTERNAL PADS PER T/S 8.2.10.4.1B AND INSPECT PER T/S 8.2.9.4.6. REPORT COMPL.	------ ------ NR QC NASA QC
		20-071C	MSTC	KSTC	SLA +Z PAD REMOVAL AND INSPECTION IS COMPLETE. PROCEED WITH PLATFORM REMOVAL.	
-20 32		20-072	MTPE	SCDR	PANEL 8.. EDS 1 CB - CLOSE 008C049 2 CB - CLOSE 008C050 3 CB - CLOSE 008C051 PANEL 2 EDS AUTO SW - (ON-UP) 002S067	
		20-073	MTPE	SCDR MSEQ MGNR MACE MNQC	MOVE TO CH 223 FOR EDS CHECK PER TCP-K-0042.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
-20 30		20-074	MSTC	CVTS	1. CSM EDS POWER IS COMING ON 2. CSM PERSONNEL ON CH 223 FOR EDS TEST.	
					NOTE THE FOLLOWING SEQ TO BE PERFORMED AFTER TCP K-0042 CALL TO STATION.	
	223	20-075	MSTC	SCDR	PANEL 7.. EDS POWER SW - (ON-UP) TIME _____	007S001

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TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		20-075					
			MSEQ		EDS VOTE 1 OUT LITE ON	CD0132	
					EDS VOTE 2 OUT LITE ON	CD0133	
					EDS VOTE 3 OUT LITE ON	CD0134	
-20 00	212	20-076	MSEQ	MSTC	EDS TESTING COMPLETE.		
		20-076A	MECS	MTPE	SUIT WICK VERIF COMPLETE		*1
		20-077	MSTC	SCDR	PANEL 7..		
					EDS POWER SW - OFF	007S001	
					TIME		

					PANEL 2		
					EDS AUTO SW - OFF	002S067	
					PANEL 8..		
					EDS		
					1 CB - OPEN	008C049	
					2 CB - OPEN	008C050	
					3 CB - OPEN	008C051	
			MSEQ		EDS VOTE 1 OUT LITE OFF	CD0132	
					EDS VOTE 2 OUT LITE OFF	CD0133	
					EDS VOTE 3 OUT LITE OFF	CD0134	
		20-078	MSTC	CVTS	CSM EDS POWER IS OFF.		
		20-079	CVTS	MSTC	SILO 4 A/C BEING POWERED DOWN		*2
-19 45		20-080	MTPE	MSTC SCDR MACE MGNR MNQC	SWITCH TO CH 212		
		20-081	MSTC	CVTS	CSM PERSONNEL ON CH 223 TO SUPPORT FT 25.		
		20-082	MTPE	SPAD	PERFORM T/S 8.2.10.1.6 THRU 8.2.10.1.15. REPORT COMPLETION.		*2

NR QC NASA QC

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
	223	20-083	CLOK	SCDR	PANEL 2	
					LV SII/SIVB SW - LV STAGE LV SII/SIVB SW - OFF LV GUID SW - CMC	
			MGNR		S/C CONTROL OF SAT LITE ON LV XLUNAR SW - INJECT LV XLUNAR SW - SAFE LV GUID SW - IU	
	223	20-084	CLOK	SCDR	SUPPORT NO LONGER REQUIRED	
		20-085	MSTC	SCDR MGNR MNQC	SWITCH TO CH 222	
-19 30		20-086	MTPE	SPAD	PROCEED WITH T/S 8.2.10.1.4 (PUNCTURE GN2 PRESS VESSEL) REPORT COMPLETION	------ ------ NR QC NASA QC
		20-087	MTPE	SNQC SGQC	PROCEED WITH MSS INSPECT PER T/S 8.2.10.6.8	
-19 00		20-088	KSTC	MSTC	HAVE SPAD SEND CREW TO REMOVE 525 QUAD 2 & 3 PADS AND PERFORM FINAL INSP.	*2
		20-088A	MTPE	SPAD	IN XA525 QUAD 2 & 3 AREA. REMOVE SLA INTERNAL PADS PER T/S 8.2.10.4.1B, C INSPECT PER T/S 8.2.9.4.6. REPORT COMPL.	------ ------ NR QC NASA QC
		20-089	MTPE	MECS	PROCEED WITH STOWAGE PER K-3300.	
-17 30		20-090	MTPE	SPAD	INSTALL CO2 ABSORBERS PER T/S 8.2.10.1.16	
-17 00		20-091	MTPE	SPAD	VERIFY T/S8.2.10.1.16COMPLETE	------ ------ NR QC NASA QC
		20-092	MTPE	MECS	PROCEED WITH SUIT CIRCUIT LEAK CHECK, PURGE AND SAMPLE PER SEQ 6V2. REPORT WHEN COMPLETE.	*1
		20-093	CVIS	MSTC	RECONFIGURE SA-8 ECS DUCT TO FLIGHT CONFIGURATION.	
		20-094	MTPE	SPAD	RECONFIGURE SA-8 ECS DUCT TO FLIGHT CONFIGURATION PER T/S 8.2.10.6.11 REPORT COMPLETION	------ ------ NR QC NASA QC

TIME	COMM CH	SEQ-NO	COMM STA	RLSP STA	DESCRIPTION	REMARKS
		20-095	MTPE	SPAD	REPORT COMPLETION OF FOLLOWING T/S..	
					A. 8.2.10.1.3, .5 ------ NR QC ------- NASA QC	
					B. 8.2.10.2.1 ------ NR QC ------- NASA QC	
					C. 8.2.10.3.10 ------ NR QC ------- NASA QC	
					D. 8.2.10.4.1, 2, 3, 4, 5 ------ NR QC ------- NASA QC	
					E. 8.22.2 ------ NR QC ------- NASA QC	*2
		20-096			(DELETED)	
-16 20		20-097	MTPE	SPAD	PROCEED WITH PLAT 4 BREAKUP PER TEST SETUP 8.2.10.6.7	
					REPORT COMPLETION ------ NR QC ------- NASA QC	
		20-098	MECS	MTPE	SUIT CIRCUIT LEAK CHECK AND PURGE COMPLETE.	
		20-099	MSIC	CVTS	PLATFORM 4 IS AVAILABLE FOR OPENING.	
-16 15		20-100			SILO 4 BREAKUP START (SUPPORT)	
		20-101	MSIC	CTSC	CLEAR TO PREP CABIN PURGE SETUP.	
-15 35		20-102	MTPE	SPAD	VERIFY READY FOR SILO 5 BREAKUP.	
		20-103	MSIC	CVTS	PLATFORM 5 IS AVAILABLE FOR OPENING.	
		20-104	MSIC	SCDR	PANEL 8	
					EDS	
					1 CB - CLOSE	008C049
					2 CB - CLOSE	008C050
					3 CB - CLOSE	008C051
					PANEL 7	
					EDS PWR SW (ON-UP)	
				MSEQ	EDS VOTE 1 OUT LITE ON	CD0132

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-104			EDS VOTE 2 OUT LITE ON	CD0133
					EDS VOTE 3 OUT LITE ON	CD0134

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-105	MSTC	SCDR	STANDBY ON CH223 TO REPORT ABORT REQUEST LITE CYCLING DUE TO L/V TESTING.	
		20-106	MSTC	CVTS	EDS PWR IS ON SCDR ON CH 223 FOR ABORT LITE CK.	
	223	20-107	CLTC	SCDR	VERIFY ABORT LITE ON	
	223	20-108	CLTC	SCDR	VERIFY ABORT LITE OFF.	
-15 30		20-109	MSTC	CVTS	CLEAR TO REMOVE SA-8 YELLOW LADDER.	
-15 25					SILO 5 BREAKUP START (SUPPORT)	
-15 15		20-110	CVTS	MSTC	REQUEST EDS PWR OFF ABORT LITE CK COMPLETE	
		20-111	MSTC	SCDR	PANEL 7	
					EDS PWR SW - OFF	
				MSEQ	EDS VOTE 1 OUT LITE OFF CD0132 EDS VOTE 2 OUT LITE OFF CD0133 EDS VOTE 3 OUT LITE OFF CD0134	
		20-112	MSTC	CVTS	EDS PWR IS OFF	
		20-113	MTPE	SCDR	PANEL 8	
					EDS 1 CB - OPEN 008C049 2 CB - OPEN 008C050 3 CB - OPEN 008C051	
-14 30		20-114	CVTS	MSTC	VERIFY READY FOR SA-8 TIP RETRACT	
		20-115	MTPE	SPAD	PROCEED WITH T/S 8.2.10.6.10 (INERT GAS PRESS PAD H/U)	
					REPORT COMPLETION ------ ------ NR QC NASA QC	
		20-116			SILO 5 OPEN (SUPPORT	
		20-117			SILO 4 OPEN (SUPPORT	
		20-118	MTPE	SNQC	REPORT COMPLETION OF T/S 8.2.9.4.6 (SLA INT W/S INSPECT) ------ ------ NR QC NASA QC	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-14 00		20-119	KSTC	MSTC	PS 1 AND 5 MAY BE SECURED FOR LAUNCH. ALL ACE LM CONTROL CMDS FOR PSI AND PS5 HAVE BEEN REMOVED.	*2
					NOTE VERIFY GAEC THROUGH WITH PS 1 AND 5 BEFORE PROCEEDING.	
		20-120	MEPS		PS 5 BATT ENABLE (R094) - OFF KC7711	
			MEPS		PS 5 BAT EN LITE OFF GC5145	
			MEPE		PS 5 BAT EN LITE OFF GC5145	
			SPDS		C14-628 PS 5 BATTERY ON LITE OFF	
		20-121	MEPS	MEPE	FEEDER BUS C (C076) - OFF KC7714	
			MEPE		220 3234 330 IS INSERTED	
			MEPE		PS 5 GSE BUS C ON LITE OFF GC5148	
			SPDS		C14-628 PS 5 FEEDER BUS C ON LITE OFF	
		20-122	MEPS	MEPE	FEEDER BUS B (C076) - OFF KC7713	
			MEPE		220 3234 320 IS INSERTED	
			MEPE		PS 5 GSE BUS ON LITE OFF GC5147	
			SPDS		C14-628 PS 5 FEEDER BUS B ON LITE OFF	
		20-123	MEPS		PS 5 DC ON (R094) - OFF KC7710	
			MEPS		PS 5 OUTPUT ON LITE OFF GC5143 GSE BUS PS 5 IS 0+ 2-0 (P2-23) GC5150	
			SPDS		C14-626 PS 5 DC OUTPUT POWER ON LITE OFF	
		20-124	MEPS		PS 5 AC START (R094) - OFF KC7709	
			MEPS		PS 5 OUTPUT VDC INDICATES 0+/- 1 GC5146	
			SPDS		C14-626 PS5 AC INPUT POWER ON LITE OFF	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-125	MEPS	CSGS	MSS ACE PS BATT ENABLE - OFF	
			CSGS		ACTIVATED LITE OFF	
			SPDS		C14-628 PS 1 BATTERY ON LITE OFF	
			MEPE		PS 1 BAT EN LITE OFF	GC5140
			MEPS		PS 1 BAT EN LITE OFF	GC5140
		20-126	MEPS	SPDS	C14-628/PS 1 VERIFY/SET... FEEDER BUS A SW - REMOTE C14-205 LEM SW - REMOTE	
		20-127	MEPS	CSGS	MSS/CSM ACE BUS - OFF MSS/LEM ACE BUS - OFF	
			CSGS		ACTIVATED LITE OFF	
			MEPE		PS 1 GSE BUS ON LITE OFF	GC5142
		20-128	MEPS	CSGS	MSS ACE PS OUTPUT - OFF	
			CSGS		ACTIVATED LITE OFF	
			SPDS		C14-626 PS 1 DC OUTPUT POWER ON LITE OFF	
			MEPE		PS 1 OUTPUT ON LITE OFF	GC5138
			MEPS		PS 1 OUTPUT ON LITE OFF GSE BUS PS 1 IS 0+2-0 (P2-23)	GC5138 GC5149
		20-129	MEPS	CSGS	MSS ACE PS INPUT - OFF	
			CSGS		INPUT LITE OFF	
		20-130	MEPS	MACE	ACTIVATE DTCS SURVILLANCE 33 0010 5106 33 0010 5104	C124
		20-131	MTPE	MACE	EXECUTE THE FOLLOWING.. DCBA R114 1011	
		20-132	MEPS	SFET	C14-240 DC PWR - 12V SW - OFF	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-132			DC PWR +6V SW - OFF DC PWR +12V SW - OFF DC PWR +28V SW - OFF AC PWR SW - OFF	
			SFET		-12 DC PWR LITE OFF +6V DC PWR LITE OFF +12V DC PWR LITE OFF +28V DC PWR LITE OFF AC PWR LITE OFF	
					C14-590 PANEL PWR SW - OFF MAIN PWR CB 1 - OFF	
					C14-268 PWR ON CB - OPEN	
					C14-484 AM 1 SW - OFF AC SW - OFF	
		20-133	MTPE	SPAD	PROCEED WITH CABLE DISC PER T/S 8.2.10.6.2 THRU 8.2.10.6.6	
					REPORT COMPLETION ------ NR QC	
		20-134	MTPE	MECS	PERFORM FACILITY GAS MIXTURE (60/40) VERIFICATION PER SEQ 06V2.	
		20-135			(DELETED)	
-13 00		20-136	MTPE	SPAD	PROCEED WITH T/S 8.2.10.1.2 (MIRROR COVER REMOVAL)	
					REPORT COMPLETION ------ NR QC ------- NASA QC	
-12 45		20-137	SPAD	MTPE	CREW SYS STOWAGE COMPLETE.	
		20-138	MTPE	MSCL MSCR	RECORDER 17	
					1/4 2/X 3/1 4/X 5/3 6/1 7/3 8/1	
					RECORDER 19	
					1/4 2/4 3/1 4/X 5/3 6/1 7/3 8/1	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-138			CAUTION	
					RCS ENGINES ARE CONNECTED. AUTO RCS SELECT SWITCHES (16) ON PANEL 8 SHALL REMAIN OFF UNTIL AFTER PRIME CREW INGRESS.	
		20-139	MTPE	SCDR	PANEL 8	
					SCS	
					TVC AC1 CB - CLOSE	008C055
					AC1 CB - CLOSE	008C009
					AC2 CB - CLOSE	008C010
					ECA/TVC AC2 CB - CLOSE	008C054
					DIRECT ULL	
					MNA CB - OPEN (GUARDED)	008C072
					MNB CB - OPEN (GUARDED)	008C073
					CONTR/DIRECT	
					1 MNA CB - CLOSE	008C013
					1 MNB CB - CLOSE	008C014
					2 MNA CB - CLOSE	008C070
					2 MNB CB - CLOSE	008C071
					A/C ROLL	
					MNA CB - CLOSE	008C015
					MNB CB - CLOSE	008C016
					B/D ROLL	
					MNA CB - CLOSE	008C017
					MNB CB - CLOSE	008C018
					PITCH	
					MNA CB - CLOSE	008C019
					MNB CB - CLOSE	008C020
					YAW	
					MNA CB - CLOSE	008C021
					MNB CB - CLOSE	008C022
					ORDEAL	
					AC 2 CB - CLOSE	008C065
					MNB CB - CLOSE	008C064
					SCS	
					CONTR/AUTO	
					MNA CB - CLOSE	008C074
					MNB CB - CLOSE	008C075
					LOGIC BUS	
					1/2 MNA CB - CLOSE	008C063
					3/4 MNA CB - CLOSE	008C023
					1/4 MNB CB - CLOSE	008C062
					2/3 MNB CB - CLOSE	008C024
					SYS	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-139			MNA CB - CLOSE 008C011	
					MNB CB - CLOSE 008C012	
					EMS	
					MNA CB - CLOSE 008C052	
					MNB CB - CLOSE 008C053	
					SPS	
					PITCH 1 BAT A CB - OPEN 008C031	
					PITCH 2 BAT B CB - OPEN 008C032	
					YAW 1 BAT A CB - OPEN 008C033	
					YAW 2 BAT B CB - OPEN 008C034	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-140	MTPE	SCDR	PANEL 7	
					FDAI/GPI PWR SEL - OFF 007S003	
					SCS ELEC PWR SEL - ECA 007S005	
					BMAG PWR 1 SEL - OFF 007S006 2 SEL - OFF 007S007	
					SCS TVC SERVO PWR 1 SW - OFF 007S008 2 SW - OFF 007S009 LOGIC PWR 2/3 SW - ON (UP) 007S010 SIG COND/DR BIAS PWR 1 SW - AC1 007S011 2 SW - AC2 007S012	
		20-141	MTPE	SCDR	PANEL 2	
					C/W NORMAL SW - NORMAL 002S007	
					NOTE TO PREVENT EXCESSIVE TEMP OF THE C/W LIGHTS THE C/W NORMAL SW WILL BE PLACED TO THE ACK POSITION FOLLOWING VERIFICATION OF THE BMAG TEMP LITES. THE SWITCH WILL BE PERIODICALLY POSITIONED TO NORMAL TO DETERMINE WHEN THE BMAG TEMP LITES GO OFF.	
		20-142	MTPE	SCDR	PANEL 1	
					TRANS CONTR PWR NORM 1 SW - OFF 001S066	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-142			ROT CONTR PWR	
					NORM 1 SW - OFF	001S064
					NORM 2 SW - OFF	001S065
					DIRECT 1 SW - OFF	001S013
					DIRECT 2 SW - OFF	001S067
					PANEL 7	
					BMAG 1 PWR SEL - WARMUP	007S006
			MSCR		RECORD BMAG 1 WARMUP START TIME -----	
		20-143	MTPE	SCMP	PANEL 2	
					BMAG 1 TEMP LT ON	
		20-144	MTPE	SCDR	PANEL 1	
					MASTER ALARM LT ON	001S001
					MASTER ALARM - RESET	001S001
		20-145	MTPE	SCDR	PANEL 7	
					BMAG 2 PWR SEL - WARMUP	007S007
			MSCR		RECORD BMAG 2 WARMUP START TIME -----	
		20-146	MTPE	SCMD	PANEL 2	
					BMAG 2 TEMP LT ON	
		20-147	MTPE	SCDR	PANEL 1	
					MASTER ALARM LT ON	001S001
					MASTER ALARM - RESET	001S001
		20-148	MTPE	SCDR	PANEL 7	
					FDAI/GPI PWR SEL - BOTH	007S003

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-149	MTPE	MSCL	RECORD SCS NULL VOLTAGE FOR ENGINEERING INFORMATION ONLY.	
				MSCL	ROLL AT ER DEG. (P17-2) -----	CH3502
					PITCH AT ER DEG. (P17-2) -----	CH3500
					YAW AT ER DEG. (P17-2) -----	CH3501
					ROLL RATE DG/S (P17-3) -----	CH3505
					PITCH RATE DG/S (P17-3) -----	CH3503
					YAW RATE DG/S (P17-3) -----	CH3504
		20-150	MTPE	MSCR	SCS CONT MODE LITE ON	CH3607
					GYRO 1 SMRD LITE ON	CH3623
					GYRO 2 SMRD LITE ON	CH3624
					ATT DB MIN LITE ON	CH3588
					ROLL BMAG RATE 2 LITE ON	CH3636
					PITCH BMAG RATE 2 LITE ON	CH3639
					YAW BMAG RATE 2 LITE ON	CH3642
					LIMIT CYCLE ON LITE OFF	CH3606
		20-151	MTPE	SCMP	PANEL 2	
					REPORT WHEN BMAG TEMP LITES GO OFF	
				SCMP	BMAG 1 TEMP LITE OFF	
				MSCL	RECORD TIME -----	
				SCMP	BMAG 2 TEMP LITE OFF	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-151	MSCL		RECORD TIME -----	
					BMAG 1 WARM-UP TIME MIN -----	1 HR MAX
					BMAG 2 WARM-UP TIME MIN -----	1 HR MAX
					NOTE SCS SYSTEMS BMAG 1 AND BMAG 2 SHALL REMAIN IN WARM-UP UNTIL PRIME CREW INGRESS.	
		20-152	MTPE	SCDR	PANEL 2 C/W NORMAL SW - ACK	002S007
-12 20		20-153			SILO 3 BREAKUP START (SUPPORT)	
		20-154	MTPE	SPAD	START CLEARING NON-ESSENTIAL PERSONNEL.	
		20-155	MTPE	SNQC SGQC	REPORT COMPLETION OF T/S 8.2.10.6.8 (FACILITY SHAKEDOWN INSPECT) ------ ------- NR QC NASA QC	
		20-156	MTPE	SNQC SGQC	PROCEED WITH LUT-PAD INSPECT PER T/S 8.2.10.5.1	
		20-157	MTPE	SPAD	VERIFY READY FOR MSS W/R DOOR LOCK INSTALLATION	
		20-158	MSTC	CVTS	CLEAR FOR MSS W/R DOOR LOCK INSTALLATION.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-159	MTPE	SCDR	PANEL 8	
					EDS	
					1 CB - CLOSE	008C049
					2 CB - CLOSE	008C050
					3 CB - CLOSE	008C051
					PANEL 1	
					LV/SPS IND SII-SIVB SW - SII-SIVB	001S053
					LV TK PRESS S-II FUEL (LH)	
					IND _____ PSI	
					(RH) IND _____ PSI	
					LV TK PRESS S-IVB FUEL (LH)	
					(LH) IND _____ PSI	
					(RH) IND _____ PSI	
					NOTE	
					MSTC OBTAIN FOLLOWING READINGS FROM V2MS AND V4MS ON CH 212 AT T-12 15.	
					S-II FUEL TANK PRESS	
					FUEL ULLAGE EDS NO. 1 _____	
					FUEL ULLAGE EDS NO. 2 _____	
					S-IVB FUEL TANK PRESS	
					FUEL ULLAGE EDS NO. 1 _____	
					FUEL ULLAGE EDS NO. 2 _____	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-159			NOTE THE READINGS OBTAINED IN THE CM SHALL COMPARE WITH THE VALUES OBTAINED FROM THE LV WITHIN THE FOLLOWING TOLERANCES.. S-II FUEL +/- 3.1 PSI S-IVB FUEL +/- 3.0 PSI	
		20-160	MTPE	SCDR	PANEL 8 EDS 1 CB - OPEN 008C049 2 CB - OPEN 008C050 3 CB - OPEN 008C051 PANEL 1 LV/SPS IND S-II/S-IV B SW - GPI	
-12 15		20-161	CVTS	MSTC	1.SM ECS AIR GOING TO NORMAL FLOW. 2. MSS PWR XFER TO OCCUR AT THIS TIME.	*2
		20-162	MTPE	SPAD SNQC	1. PROCEED WITH T/S 8.2.11.2 (HATCH C/O INSPECT) 2. PROCEED WITH T/S 8.2.11.1 (PRE-CREW INGRESS INSPECT)	
		20-163	MTPE	SCMP	PANEL 226 NUM/INTG LTG LEB AC 2 CB - CLOSE 226C033 NUM/INTG LTG LMDC AC 1 CB - CLOSE 226C037 PANEL 100 LEB NUMERICS LT CONT - AS REQD FOR MIN ACCEPTABLE LIGHTING	
		20-164	MTPE	SCDR	PANEL 8 INT NUMERICS LT CONT - AS REQD FOR MIN ACCEPTABLE LIGHTING	
				MEPE	HRS _____ MIN _____ SEC _____	
		20-165	MTPE	SCMP	PANEL 229	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-165			TIMERS MN A CB - CLOSE 229C040 MN B CB - CLOSE 229C041	
		20-166	MTPE	SCDR	PANEL 1 EVENT TIMER START SW - STOP, THEN CENTER. EVENT TIMER RESET SW - RESET, REL EVENT TIMER IND ALL ZEROES PANEL 2 MSN TIMER SW - RESET, REL MSN TIMER IND ALL ZEROES MSN TIMER SW - START MSN TIMER IND COUNTING UP	
		20-167	MTPE	SLMP	PANEL 306 EVENT TIMER START SW - STOP, THEN CENTER. EVENT TIMER RESET SW - RESET, REL TIMER IND ALL ZEROES MSN TIMER SW - RESET, REL MSN TIMER IND ALL ZEROES MSN TIMER SW - START MSN TIMER IND COUNTING UP	
		20-168	MTPE	SCMP	PANEL 306 EVENT TIMER START SW - STOP, THEN CENTER MISSION TIMER SW - STOP PANEL 2 MSN TIMER SW - STOP	
		20-169	MTPE	MEPS	PERFORM BATTERY CHECK	
		20-170	MEPS	SCMP	PANEL 250.. PYRO A SEQ A CB - CLOSE 250C016 PYRO B SEQ B CB - CLOSE 250C017	
				SLMP	PANEL 3 BAT A VOLTAGE VDC -----	35.5 +/- 2.5 VDC

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		20-170					
					BAT B VOLTAGE ----- VDC		35.5 +/- 2.5 VDC
					BAT C VOLTAGE ----- VDC		35.5 +/- 2.5 VDC
					PYRO BAT A ----- VDC		35.5 +/- 2.5
					PYRO BAT B ----- VDC		35.5 +/- 2.5
		20-171	MEPS	SCMP	PANEL 250..		
					PYRO A SEQ A CB - OPEN	250C016	
					PYRO B SEQ B CB - OPEN	250C017	
			MEPS		BAT A VOLTAGE ----- VDC (P1-11)	CC0210	35.5 +/- 2.5
					BAT B VOLTAGE ----- VDC (P1-11)	CC0211	35.5 +/- 2.5
		20-172	MEPS	MTPE	BATTERY CHECK COMPLETE		
		20-173	CBTS	MSTC	MSS PLATFORM OBSERVERS ARE TO REPORT TO PVTS AT T-11 45 AT MSS BASE LOW RISE ELEVATOR.		
					NOTE PERSONNEL REQUIRED FOR MSS MOVE... NR TECHS - 3 - MSS OBSERVERS NR TECH - SORC - MSS -22 FT. LEVEL (K-BTL. PURGE S14-057/ S14-064) NR QC - SNQC - MSS -22 FT. LEVEL		
-12	00	20-174	MTPE		NOTIFY BACKUP CREW TO REPORT ON STATION		
-11	30	20-175	CVTS	MSTC	VERIFY READY TO MAINTAIN RF SILENCE AND CONTROLLED SWITCHING ACROSS THE LV/SC INTERFACE		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-175				
					NOTE	
					RF SILENCE TO END AT T-10 45. CVTS WILL NOTIFY.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
-11 00		20-176	CVTS	MSTC	VERIFY READY FOR AUX DAMPER DISC.	
		20-177	SPAD	MTPE	CLOSEOUT CREW ON STATION.	
		20-178	MTPE	SPAD SNQC	1. VERIFY T/S 8.2.11.2 (HATCH C/O INSPEC) COMPLETE. ------ NR QC ------- NASA QC 2. VERIFY T/S 8.2.11.1 (PRE-CREW INGRESS INSPECT) COMPLETE. ------ NR QC ------- NASA QC	
		20-178A	CVTS	MSTC	VERIFY ALL MSS PREPARATIONS FOR MOVE ARE COMPLETE AND OBSERVERS ARE ON STATION.	*1
		20-179	MTPE	SCMP	INGRESS L.H. COUCH	
		20-180	MTPE	SLMP	INGRESS R.H. COUCH	
					NOTE DAMPER CHANGEOVER AT 1045 AND 1010	
		20-181	MTPE	SCMP	OBTAIN 3 (EA.) TRAINING ASTRO HEADSETS AND 3 (EA).CWG ADAPTERS FROM SPAD. CONNECT CWGS TO CCUS + HEADSETS TO CWG ADAPTERS LAY HEADSETS ASIDE.	*2
					NOTE THE FOLLOWING CM OPERATIONS WILL BE PERFORMED BY SCMP AND SLMP (BACK-UPS). CALLS TO SCDR ARE REFERENCED TO THE LEFT HAND COUCH STATION.	
		20-182	MTPE	SCMP	PANEL 2	
					C/W NORMAL SW - NORMAL 002S007 C/W CSM SW - CSM 002S008 C/W PWR SW - 2 002S009 TAKE STATUS OF C/W LITES	
				SCDR	PANEL 1	
					MASTER ALARM LITE ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-182		SLMP	PANEL 3	
					MASTER ALARM LITE ON	
				SCMP	PANEL 122	
					MASTER ALARM LITE ON MASTER ALARM PB - RESET	
		20-183	MTPE	SCMP	PANEL 2	
					C/W PWR SW - 1	
				SCDR	PANEL 1	
					MASTER ALARM LITE ON	
				SLMP	PANEL 3	
					MASTER ALARM LITE ON	
				SCMP	PANEL 122	
					MASTER ALARM LITE ON MASTER ALARM PB - RESET	
		20-184	MTPE	SCMP	PANEL 2	
					C/W LAMP TEST SW - 1, HOLD	002S079
				SCMP	L.H. CW LITES (LABELED) ON C/W NORMAL SW - BOOST	002S007
				SCDR	PANEL 1	
					MASTER ALARM LITE OFF	
		20-185	MTPE	SCMP	PANEL 2	
					C/W NORMAL SW - NORMAL	002S007
				SCDR	PANEL 1	
					MASTER ALARM LITE ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-186	MTPE	SCMP	PANEL 2	
					C/W LAMP TEST SW - 2, HOLD	002S079
				SCMP	L.H. C/W LITES (LABELED) OFF (EXCEPT LITES ON DURING STATUS) R.H. C/W LITES (LABELED) ON	
				SCDR	PANEL 1	
					MASTER ALARM LITE OFF	
				SLMP	PANEL 3	
					MASTER ALARM LITE ON	
		20-187	MTPE	SCMP	PANEL 2	
					C/W LAMP TEST SW - REL	002S079
				SCMP	R.H. C/W LITES (LABELED) OFF (EXCEPT LITES ON DURING STATUS)	
				SLMP	PANEL 3	
					MASTER ALARM LITE OFF	
		20-188	MTPE	SCMP	PANEL 2	
					C/W NORMAL SW - ACK	002S007
					EMS PRELAUNCH TEST ----------	
					(5/32 IN HEX DRIVER REQUIRED)	
		20-189	MTPE	SCDR	PANEL 1	
					EMS FUNCTION SEL SW - OFF	
					PANEL 8	
					EMS MN A CB - CLOSE	008C052
					EMS MN B CB - CLOSE	008C053

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-189			PANEL 1	
					OPEN EMS GTA COVER	
					EMS GTA SW - (UP)	001A103
					EMS MODE SW - STBY	001A102
					EMS FUNCTION SEL - DV	001A101
					NOTE	
					WAIT 5 SEC	
		20-190	MTPE	SCDR	EMS MODE SW - NORMAL	001A102
					EMS GTA NUL ADJUSTMENT - ADJUST UNTIL EMS RANGE-DV IND LEAST SIGNIFICANT DIGIT CHANGES LESS THAN 1 UNIT IN 10 SEC INTERVAL.	
					EMS FUNCTION SEL - DV SET/VHF RNG	001A101
					EMS DV/EMS SET SW - SLEW EMS RANGE/DV IND TO +1586.8	
					EMS FUNCTION SEL - DV TEST	001A101
				SCDR	EMS SPS THRUST LITE ON	
					EMS RANGE/DV IND DECREASES (10 SEC)	
					EMS SPS THRUST LITE OFF (AT DV APPROX -0.1 FPS)	
					EMS RANGE/DV IND - STOPS AT -20.8 +/- 20.7 FPS	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-191	MTPE	SCDR	EMS MODE SW - STBY 001A102 EMS FUNCTION SEL - EMS TEST 1 001A101	
					NOTE WAIT 5 SEC	
					EMS MODE SW - NORMAL 001A102	
					NOTE WAIT 10 SEC	
				SCDR	EMS .05 G LITE OFF EMS SPS THRUST LITE OFF (EMS RSI LOWER) LITE OFF (EMS RSI UPPER) LITE OFF EMS RANGE/DV IND 0.0	
		20-192	MTPE	SCDR	SLEW (EMS) G-V SCROLL UNTIL DISPLAY INDEX IS SUPERIMPOSED UPON NOTCH IN NEXT SELF-TEST PATTERN. RECORD SELF TEST PATTERN NO. _____. EMS FUNCTION SEL - EMS TEST 2 001A101	
				SCDR	EMS .05 G LITE ON	
					NOTE WAIT 10 SEC	
					ALL OTHER EMS LITES OFF	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-193	MTPE	SCDR	EMS FUNCTION SEL - EMS TEST 3	001A101
			SCDR		EMS .05 G LITE ON	
					NOTE	
					WAIT 10 SEC	
					EMS RSI LOWER LITE ON	
		20-194	MTPE	SCDR	EMS DV-EMS SET SW - SLEW EMS RANGE/DV IND TO 58 +/- 0.0 NM	
					EMS FUNCTION SEL - EMS TEST 4	001A101
			SCDR		EMS .05 G LITE ON	
					ALL OTHER EMS LITES OFF	
					EMS G-V SCROLL TRACE WITHIN TEST PATTERN FOR 10 SEC, THEN STOPS IN LOWER RIGHT CORNER.	
					EMS RANGE/DV IND COUNTS TOWARD ZERO FOR 10 SEC, THEN STOPS AT 0.0 +/- 0.2.	
		20-195	MTPE	SCDR	EMS FUNCTION SEL - EMS TEST 5	001A101
			SCDR		EMS .05 G LITE ON	
					NOTE	
					WAIT 10 SEC	
					EMS RSI UPPER LITE ON EMS RANGE/DV IND 0.0	
					EMS G-V SCROLL SCRIBE TRACES VERTICAL LINE APPROX 9 G TO 0.22 +/- 0.1 G AND STOPS (TRACE WITHIN TEST PATTERN)	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		20-196	MTPE	SCDR	EMS FUNCTION SEL - RNG SET	001A101 001A102	
			SCDR		EMS G-V SCROLL SCRIBE TRACES VERTICAL LINE FROM 0.22 G TO 0 +/- 0.1 G AND STOPS.		
		20-197	MTPE	SCDR	EMS MODE SW - STBY		
			SCDR		ALL EMS LITES OFF		
		20-198	MTPE	SCDR	EMS FUNCTION SEL - OFF	001A101	
					EMS GTA SW - (DOWN)	001A103	
					CLOSE GTA COVER		
		20-199	MTPE	SCMP	PANEL 377		
					GLY TO RAD SEC VLV - NORMAL		
		20-200	MTPE	SLMP	PANEL 2		
					ECS IND SEL - SEC	002S089	
					SEC COOL LOOP PUMP SW - AC1	002S054	
					TIME ---------- ECS RAD TEMP PRIM/SEC IN IND DEG. F ----- ECS RAD TEMP SEC OUT IND DEG. F ----- GLY EVAP TEMP OUT IND DEG. F ----- GLY EVAP STEAM PRESS IND PSIA ----- GLY DISCH PRESS IND PSIG -----		PEG HIGH 60 MAX

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		20-200			ACCUM PRIM/SEC QTY PCNT ----- SEC COOL LOOP PUMP SW - AC2	002S054	
					GLY DISCH PRESS IND PSIG ----- SEC COOL LOOP PUMP SW - (OFF-CENTER) TIME ----------	002S054	60 MAX
					ECS IND SEL - PRIM	002S089	
		20-201	MTPE	SCMP	PANEL 377 GLY TO RAD SEC VLV - BYPASS		
		20-202	MTPE	SLMP	PANEL 2 GLY DISCH PRESS IND PSIG ----- ACCUM PRIM/SEC QTY IND PCNT ----- PANEL 4 ECS GLY PUMPS SEL - 1 AC1 PANEL 2 GLY DISCH PRESS IND PSIG ----- ECS RAD FLOW CONT PWR SW - PWR ECS RAD FLOW CONT AUTO SW - 2 ECS RAD TB - 2 ECS RAD FLOW CONT AUTO SW - 1 WAIT 20 SEC - THEN AUTO ECS RAD TB - GRAY ECS RAD FLOW CONT PWR SW - (CENTER)	004S002 002S085 002S084 002S084 002S085	60 MAX

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-203	MTPE	SCDR	PANEL 7	
					DIRECT 02 VLV - VERIFY/ADJUST FOR 0.4 +/- 0.1 LB/HR	
				SLMP	PANEL 2	
					02 FLOW IND _____ LB/HR	
		20-204	MTPE	SLMP	PANEL 3	
					AC BUS 2 RESET SW - OFF	003S067
			MEPE		HR _____ MIN _____ SEC _____	
		20-205	MTPE	SLMP	PANEL 3	
					INV 3 SW - MNB	003S059
					INV 2 AC BUS 2 SW - OFF	003S065
					INV 3 AC BUS 2 SW - (ON-UP)	003S066
					AC BUS 2 RESET SW - RESET, REL	003S067
					MASTER ALARM LITE ON	
					MASTER ALARM PB - RESET	
			SLMP		AC BUS 2	
					PH A _____ VAC	115 +/- 5
					PH B _____ VAC	115 +/- 5
					PH C _____ VAC	115 +/- 5

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-206	MTPE	SLMP	PANEL 3	
					AC BUS 2 RESET SW - OFF 003S067 INV 3 AC BUS 2 SW - OFF 003S066 INV 2 AC BUS 2 SW - (ON-UP) 003S065 AC BUS 2 RESET SW - RESET, REL 003S067	
					MASTER ALARM LITE ON MASTER ALARM PB - RESET INV 3 SW - OFF	
			MEPE		HR _____ MIN _____ SEC _____	
			SLMP		AC BUS 2	
					PH A _____ VAC	115 +/- 5
					PH B _____ VAC	115 +/- 5
					PH C _____ VAC	115 +/- 5
		20-207	MSTC	HFLT	STAND BY FOR BATTERY STATUS.	
		20-208	MSTC	MEPS	GIVE STATUS OF ENTRY/POST LANDING BATTERIES SINCE FULL CHARGE.	
			MEPS		BAT A _____ AMP HRS REMOVED (APPROX)	
					BAT B _____ AMP HRS REMOVED (APPROX)	
					BAT C _____ AMP HRS REMOVED (APPROX)	
-10 25		20-209	CVTS	MSTC	VERIFY READY FOR PRIMARY DAMPER CONNECT IN 15 MIN.	
		20-210	MSTC	MTPE SCMP MNQC	PERFORM LEB CLOSEOUT SWITCH LIST ON CH 222. REPORT COMPLETION	

NOTE

ALL SYSTEMS MONITOR

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-210			NOTE 5/32 IN. ALLEN WRENCH REQUIRED FOR SWITCH LIST.	
		20-211	MTPE	SCMP	PANEL 377 --------- GLY TO RAD SEC VLV - BYPASS	
		20-212			PANEL 379 --------- PRIM ACCUM FILL VLV - OFF	
		20-213			PANEL 378 --------- PRIM GLY ACCUM VLV - (OPEN- CCW)	*1
		20-214			PANEL 382 --------- OPEN COVER SUIT HT PRIM GLY VLV - FLOW SUIT FLOW RELF VLV - OFF PRIM GLY EVAP IN TEMP VLV - MIN SUIT HT SEC GLY VLV - FLOW EVAP H2O CONT PRIM VLV - AUTO SEC VLV - AUTO H2O ACCUM 1 VLV - RMTE 2 VLV - RMTE CLOSE COVER EXTEND Y -Y STRUT AND LOCK IN PLACE	
		20-215			PANEL 350 --------- OPEN COVER C02 CANISTER DIVERT VLV - (CENTER) CLOSE COVER	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-216			PANEL 351 --------- MAIN REG A VLV - OPEN B VLV - OPEN H2O/GLY TK PRESS REG VLV - BOTH RELF VLV - BOTH EMER CABIN PRESS VLV - OFF CABIN REPRESS VLV - OFF (CCW)	
		20-217			PANEL 352 --------- WASTE TK SERVICING VLV - CLOSE PRESS RELF VLV - 2 POT TK IN VLV - CLOSE WASTE TK IN VLV - AUTO	
		20-218			FWD HATCH --------- PRESS EQUALIZATION VLV - CLOSE AND LOCK.	
		20-219			PANEL 12 -------- TUNNEL VENT VLV - LM/CM DP LM/CM PRESS DIFF IND 0.0 PSI	*1
		20-220			PANEL 301 --------- SUIT FLOW VLV - FULL FLOW	
		20-221			PANEL 300 --------- SUIT FLOW VLV - FULL FLOW	
		20-222			PANEL 302 --------- SUIT FLOW VLV - FULL FLOW CABIN HEAT EXCH LOUVERS - CENTERED	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-223			PANEL 303 ---------	
					PRIM CAB TEMP VLV - C (CW) SEC CAB TEMP VLV - MAX COOL	
		20-224			PANEL 304 ---------	
					DRNK H2O SUPPLY VLV - OFF H2O GUN PROBE SW - PUSH LOCK WATER SPRAY KNOB (RED) - LOCK CLOSED	*1
		20-225			PANEL 100 ---------	
					UTIL PWR SW - OFF 100S006	
					FLOOD DIM SW - 1 100S005 FIXED SW - OFF 100S004	
					G/N PWR OPTICS SW - OFF 100S001 IMU SW - (ON-UP) 100S002	
					RNDZ XPNDR SW - OFF 100S003	
					LEB LT NUMERICS CONT - AS REQ'D INTGL CONT - AS REQ'D FLOOD CONT - OFF	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		20-226			PANEL 306		
					MSN TIMER SW - RESET, REL	306S005	
					MSN TIMER IND ZERO		
					MSN TIMER SW - START	306S005	
					MSN TIMER IND COUNTING UP		
					MSN TIMER		
					HRS SW - CENTER	306S006	
					MIN SW - CENTER	306S007	
					SEC SW - CENTER	306S008	
					EVENT TIMER		
					START SW - STOP THEN (CENTER)	306S001	
					RESET SW - RESET, REL IND ZERO	306S002	
					MIN SW - CENTER	306S003	
					SEC SW - CENTER	306S004	*1
		20-227			PANEL 101		
					SYS TEST SEL (LH) - 5	101S001	
					SYS TEST SEL (RH) - A	101S002	
					SYS TEST IND VDC -----		1.5 -2.3 (60-92 DEG)
					SYS TEST SEL (LH) - 4	101S001	
					SYS TEST SEL (RH) - B	101S002	
					RNDZ XPNDR SW - OPERATE	101S006	
					CM RCS HTRS SW - OFF	101S003	
					WASTE H2O DUMP SW - HTR A	101S005	
					URINE DUMP SW - HTR A	101S004	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-228			PANEL 122	

					OPTICS	
					ZERO SW - ZERO	122S003
					TELE TRUN SW - SLAVE TO SXT	122S001
					MODE SW - MAN	122S002
					COUPLING SW - DIRECT	122S004
					SPEED SW - LO	122S005
					CONDITION LAMPS SW - ON	122S012
					UP TLM SW - ACCEPT	122S010
					SXT HAND CONTR (OHC) - NEUTRAL	
					RETICLE BRIGHTNESS TW - AS REQD	
					ATT IMP CONT - NEUTRAL	122S008
					MARK PB - AS IS	122S006
					MARK REJECT PB - AS IS	122S007
		20-229			PANEL 180	

					S-BND SQ SW - ENABLE	080S001
		20-230			PANEL 225	

					ALL CB'S - CLOSED EXCEPT..	
					HI GAIN ANT	
					FLT BUS CB - OPEN	225C005
					GRP 2 CB - OPEN	225C006
		20-231			PANEL 226	

					ALL CB'S - CLOSED EXCEPT..	
					FC 1 REACS CB - OPEN	226C004
					FC 2 REACS CB - OPEN	226C005
					FC 3 REACS CB - OPEN	226C006
					FC 1 RAD CB - OPEN	226C013
					FC 2 RAD CB - OPEN	226C014
					FC 3 RAD CB - OPEN	226C015
					LTG COAS/TUNNEL	
					MNB CB - OPEN	226C029

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-232			PANEL 229	

					ALL CB'S CLOSED EXCEPT..	
					MAIN REL	
					PYRO A CB - OPEN	229C048
					PYRO B CB - OPEN	229C049
					02 VAC ION PUMPS	
					MN A CB - OPEN	229C050
					MN B CB - OPEN	229C051
		20-233			PANEL 250	

					CAUTION	
					PYRO A AND B TIE TO BAT BUS A AND B CB'S (2) SHOULD NEVER BE CLOSED WHEN PYRO A AND B SEQ A AND B CB'S (2) ARE CLOSED. LOSS OF PYRO BATTERY POWER COULD RESULT.	
					ALL CB'S - CLOSED EXCEPT..	
					PYRO A BAT A TO PYRO BUS	250C018
					TIE CB - OPEN	
					PYRO B BAT B TO PYRO BUS	250C019
					TIE CB - OPEN	
					BAT C TO BAT BUS A CB - OPEN	250C015
					BAT C TO BAT BUS B CB - OPEN	250C024
		20-234			PANEL 251	

					OVBD DRAIN VLV - OFF	
		20-235			PANEL 252	

					BAT VENT VLV - CLOSED	
					WASTE STOWAGE VLV - VENT	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-236	MTPE	MSTC	LEB CLOSEOUT SWITCH LIST COMPLETE	
		20-237	MTPE	SCMP	MOVE TO LH COUCH.	
		20-238	MTPE	MTPE SCDR SLMP MNQC	PERFORM MDC SWITCHLIST ON CH 222. REPORT COMPLETION.	
					NOTE ALL SYSTEMS MONITOR	
		20-239	MTPE	SCDR	PANEL 601 --------- REPRESS 02 VLV - CLOSE	
		20-240			PANEL 13 -------- FDAI 1 SW - INRTL FDAI 2 SW - INRTL EARTH/LUNAR SW - PWR OFF ALT SET CONT - 100 (APPROX) LTG SW - OFF MODE SW - HOLD/FAST SLEW SW - (OFF-CENTER)	013S004 013S005 013S001 013S006 013S002 013S003
		20-241			THC - NEUTRAL AND LOCKED ---	
		20-242			RHC 2 - LOCKED -----	
		20-243			PANEL 375 --------- SURGE TK PRESS RELF VLV - AUTO (OPEN)	
		20-244			PANEL 376 --------- PLVC SW - NORMAL	376S002

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-245			PANEL 380 --------- 02 DEMAND REG VLV - BOTH SUIT TEST VLV - OFF SUIT RET AIR VLV - PUSH CLOSE	
		20-246			PANEL 325 --------- PRIM GLY TO RAD VLV - (PUSH - NORMAL) CABIN RELIEF VLV (LH) - BOOST ENT CABIN RELIEF VLV (RH) - BOOST ENT (SAFETY LATCH OFF)	
		20-247			PANEL 326 --------- GLY RSVR IN VLV - OPEN OUT VLV - OPEN BYPASS VLV - CLOSE 02 SM SUPPLY VLV - ON 02 SURGE TK VLV - ON 02 REPRESS PKG VLV - ON	
		20-248			PANEL 15 -------- COAS PWR SW - OFF UTIL PWR SW - OFF PL BCN LT SW - CENTER PL DYE MARKER SW - (OFF-DOWN), GUARDED PL VENT SW - OFF	015S006 015S005 015S003 015S002 015S004

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-249			PANEL 8	

NOTE

REMOVE ALL A34-377 (4) FROM PANEL 8. SPAD RETAIN FOR REINSTALLATION, IF REQ'D.

ALL CB'S - CLOSED EXCEPT FOLLOWING..

SECS	
LOGIC A CB - OPEN	008C003
LOGIC B CB - OPEN	008C004
ARM A CB - OPEN	008C001
ARM B CB - OPEN	008C002
SPS	
PITCH 1 BAT A CB - OPEN	008C031
YAW 1 BAT A CB - OPEN	008C033

(PANEL 8 SWITCHES)

AUTO RCS SELECT	
A/C ROLL A1 SW - OFF	008S017
A/C ROLL C1 SW - OFF	008S018
A/C ROLL A2 SW - OFF	008S019
A/C ROLL C2 SW - OFF	008S020
B/D ROLL B1 SW - OFF	008S021
B/D ROLL D1 SW - OFF	008S022
B/D ROLL B2 SW - OFF	008S023
B/D ROLL D2 SW - OFF	008S024
PITCH A3 SW - OFF	008S025
PITCH C3 SW - OFF	008S026
PITCH A4 SW - OFF	008S027
PITCH C4 SW - OFF	008S028
YAW B3 SW - OFF	008S029
YAW D3 SW - OFF	008S030
YAW B4 SW - OFF	008S031
YAW D4 SW - OFF	008S032
FLOOD	
DIM SW - 1	008S012
FIXED SW - OFF	008S013
FLOAT BAG	
1 SW - VENT	008S004
2 SW - VENT	008S005
3 SW - VENT	008S006

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-249			SECS	
					LOGIC 1 SW - OFF	008S011
					LOGIC 2 SW - OFF	008S015
					PYRO ARM A SW - SAFE	008S010
					PYRO ARM B SW - SAFE	008S014
					INTERIOR LT	
					NUMERICS CONT - AS REQD	
					FLOOD CONT - AS REQD	
					INTGL CONT - AS REQD	
		20-250			PANEL 7	

					EDS PWR SW - OFF	007S001
					SCS	
					TVC SERVO PWR 1 SW - OFF	007S008
					TVC SERVO PWR 2 SW - OFF	007S009
					FDAI/GPI PWR SEL - BOTH	007S003
					SCS	
					LOGIC PWR 2/3 SW - (ON-UP)	007S010
					ELEC PWR SEL - ECA	
					SIG COND/DR BIAS PWR	
					1 SW - AC1	007S011
					2 SW - AC2	007S012
					BMAG PWR	
					1 SEL - WARM UP	007S006
					2 SEL - WARM UP	007S007
					DIRECT 02 VLV - AS IS	
		20-251			PANEL 1	

					SET ALTIMETER INDEX - 3300	
					EMS FUNCTION SEL - OFF	
					EMS GTA SW - (DOWN) (COVER CLOSED)	
					EMS GTA NULL ADJ - AS IS	
					EMS MODE SW - STBY	
					EMS DV/EMS SET SW - AS IS	
					CMC ATT SW - IMU	001S002
					ACCELEROMETER - +1G	
					FDAI	
					SCALE SW - 5/1	001S003
					SEL SW - 1/2	001S004
					SOURCE SW - CMC	001S005
					ATT SET SW - GDC	001S006

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		20-251			MAN ATT		
					ROLL SW - RATE CMD	001S007	
					PITCH SW - ACCEL CMD	001S008	
					YAW SW - RATE CMD	001S009	
					LIMIT CYCLE SW - OFF	001S010	
					ATT DEADBAND SW - MIN	001S011	
					RATE SW - HIGH	001S012	
					TRANS CONTR PWR SW - ON-UP	001S066	
					ROT CONTR PWR		
					NORM 1 SW - AC/DC	001S064	
					NORM 2 SW - AC/DC	001S065	
					DIRECT 1 SW - OFF	001S013	
					DIRECT 2 SW - OFF	001S067	
					SC CONT SW - SCS	001S018	
					CMC MODE SW - FREE	001S019	
					LV/SPS IND ALPHA SW - ALPHA	001S052	
					LV ALPHA/SPS PC IND - ZERO		
					LV/SPS IND SII/SIVB SW - SII/SIVB	001S053	
					LV TK PRESS S-II FUEL		
					(LH) IND _____ PSI		
					(RH) IND _____ PSI		
					LV TK PRESS S-IVB FUEL		
					(LH) IND _____ PSI		
					(RH) IND _____ PSI		
					NO AUTO ABORT PB - GUARDED	001S029	
					APEX COVER JETT PB - GUARDED	001S030	
					LES MOT FIRE PB - GUARDED	001S031	
					DROGUE DEPLOY PB - GUARDED	001S032	
					CANARD DEPLOY PB - GUARDED	001S033	
					MAIN DEPLOY PB - GUARDED	001S034	
					CSM/LV SEP PB - GUARDED	001S035	
					CM RCS HE DUMP PB - GUARDED	001S060	
					BMAG MODE		
					ROLL SW - RATE 2	001S020	
					PITCH SW - RATE 2	001S021	
					YAW SW - RATE 2	001S022	
					SPS THRUST SW - NORMAL	001S023	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-251			DIRECT ULLAGE PB - AS IS	001S024
					THRUST ON PB - AS IS	001S025
					DV THRUST	
					A SW - OFF (GUARDED)	001S026
					B SW - OFF (GUARDED)	001S059
					SPS GMBL	
					PITCH TW - 0	
					YAW TW - 0	
					ATT SET	
					ROLL TW - 162	
					PITCH TW - 90	
					YAW TW - 0	
					GDC ALIGN PB - AS IS	001S037
					SCS TVC	
					PITCH SW - AUTO	001S038
					YAW SW - AUTO	001S039
					SPS GMBL MOT	
					PITCH 1 SW - OFF	001S040
					PITCH 2 SW - OFF	001S041
					YAW 1 SW - OFF	001S042
					YAW 2 SW - OFF	001S043
					DV CG SW - CSM	001S054
					ELS LOGIC SW - OFF, GUARDED	001S044
					ELS AUTO SW - (ON, UP)	001S063
					CM RCS LOGIC SW - OFF	001S046
					CM PRPLNT	
					DUMP SW - OFF, GUARDED	001S047
					PURGE SW - (DOWN) GUARDED	001S048
					IMU CAGE SW - (OFF-DOWN), GUARDED	001S049
					ENTRY	
					EMS ROLL SW - OFF	001S050
					.05G SW - OFF	001S051
					LV/SPS IND ALPHA SW - ALPHA	001S052
					LV/SPS IND SII/SIVB SW - GPI	001S053
					TVC GMBL DR	
					PITCH SW - AUTO	001S027
					YAW SW - AUTO	001S028
					EVENT TIMER	
					START SW - STOP	001S056
					THEN (CENTER)	
					RESET SW - RESET, REL	001S055
					MIN SW - CENTER	001S057
					SEC SW - CENTER	001S058
					IND - 00 00	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-252	MTPE	SCDR	PANEL 2 (LH)	
					SUIT CABIN DP IN H20	
					02 FLOW LB/HR	
					DOCK PROBE	
					EXTD/REL A TB - GRAY	
					EXTD/REL B TB - GRAY	
					EXTD/REL SW - OFF (GUARDED)	002S001
					RETR PRIM SW - OFF	002S002
					RETR SEC SW - OFF	002S003
					EXTERIOR LT	
					RUN/EVA SW - OFF	002S005
					RNDZ SW - OFF (CENTER)	002S114
					TUNNEL LT SW - OFF	002S006
					LM PWR SW - OFF	002S082
					UP TLM	
					CM SW - ACCEPT	002S021
					IU SW - BLOCK	002S115
					SM RCS IND SW - PRPLNT QTY	002S098
					CM RCS PRESS SW - (OFF-DOWN)	002S031
					GUARDED	
					SM RCS	
					HE 1	
					A SW - (CENTER)	002S024
					B SW - (CENTER)	002S025
					C SW - (CENTER)	002S026
					D SW - (CENTER)	002S027
					A TB - BP	
					B TB - BP	
					C TB - BP	
					D TB - BP	
					HE 2	
					A SW - (CENTER)	002S034
					B SW - (CENTER)	002S035
					C SW - (CENTER)	002S036
					D SW - (CENTER)	002S037
					A TB - BP	
					B TB - BP	
					C TB - BP	
					D TB - BP	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-252			PRPLNT	
					A SW - (CENTER)	002S047
					B SW - (CENTER)	002S048
					C SW - (CENTER)	002S049
					D SW - (CENTER)	002S050
					SEC PRPLNT	
					A TB - BP	
					B TB - BP	
					C TB - BP	
					D TB - BP	
					PRIM PRPLNT	
					A TB - BP	
					B TB - BP	
					C TB - BP	
					D TB - BP	
					SEC PRPLNT FUEL PRESS	
					A SW - (CENTER)	002S116
					B SW - (CENTER)	002S117
					C SW - (CENTER)	002S118
					D SW - (CENTER)	002S119
					RCS IND SEL - SM A	002S028
					SM RCS	
					TEMP PKG IND DEG. F	

					PRESS HE IND PSIA	

					SEC FUEL PRESS IND PSIA	

					PRPLNT QTY IND PCNT	

					IND SW - HE TK TEMP	002S098
					HE TK TEMP DEG. F.	

					RCS IND SEL - SM B	002S028
					SM RCS	
					TEMP PKG IND DEG. F.	

					PRESS HE IND PSIA	

					SEC FUEL PRESS IND PSIA	

					HE TK TEMP DEG. F.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-252			IND SW - PRPLNT QTY	002S098
					PRPLNT QTY IND _____ PCNT	
					RCS IND SEL - SM C	002S028
					SM RCS	
					TEMP PKG IND _____ DEG. F.	
					PRESS HE IND _____ PSIA	
					SEC FUEL PRESS IND _____ PSIA	
					PRPLNT QTY IND _____ PCNT	
					IND SW - HE TK TEMP	002S098
					HE TK TEMP _____ DEG. F.	
					RCS IND SEL - SM D	002S028
					SM RCS	
					TEMP PKG IND _____ DEG. F.	
					PRESS HE IND _____ PSIA	
					SEC FUEL PRESS IND _____ PSIA	
					HE TK TEMP _____ DEG. F.	
					IND SW - PRPLNT QTY	002S098
					PRPLNT QTY IND _____ PCNT	
					CM RCS PRPLNT	
					1 SW - (ON-UP), REL	002S045
					2 SW - (ON-UP), REL	002S046
					1 TB - GRAY	
					2 TB - GRAY	
					RCS IND SEL - CM1	002S028

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-252			CM RCS TEMP HE IND _____ DEG. F. PRESS HE IND _____ PSIA PRESS MANF IND _____ PSIA	
					RCS IND SEL - CM2	002S028
					CM RCS TEMP HE IND _____ DEG. F. PRESS HE IND _____ PSIA PRESS MANF IND _____ PSIA	
					SM RCS HTRS A SW - OFF B SW - OFF C SW - OFF D SW - OFF	 002S092 002S093 002S094 002S095
					RCS CMD SW - OFF, REL	002S043
					RCS TRNFR SW - SM, REL	002S044
					EDS AUTO SW - OFF	002S067
					CSM/LM FINAL SEP 1 SW - (OFF-DOWN), GUARDED 2 SW - (OFF-DOWN), GUARDED	 002S109 002S112
					CM/SM SEP 1 SW - (OFF-DOWN), GUARDED 2 SW - (OFF-DOWN), GUARDED	 002S110 002S111
					SIVB/LM SEP SW - (OFF-DOWN), GUARDED	002S108
					ABORT SYS PRPLNT SW - DUMP AUTO 2 ENG OUT SW - AUTO LV RATES SW - AUTO TWR JETT 1 SW - AUTO, GUARDED TWR JETT 2 SW - AUTO, GUARDED	 002S063 002S064 002S065 002S066 002S096

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-252			LV GUID SW - IU	002S069
					LV SII/SIVB SW - OFF, GUARDED	002S068
					LV XLUNAR SW - INJECT	002S070
					MAIN REL SW - (OFF-DOWN), GUARDED	002S071
		20-253	MTPE	SLMP	PANEL 600	
					EMER 02 VLV - CLOSE	
		20-254			PANEL 602	
					REPRESS 02	
					RELF VLV - OPEN (AUTO)	
					PRESS IND PSIG	
		20-255			RHC 1 - LOCKED	
		20-256			PANEL 227	
					SCI INST PWR SW - OFF	227S001
		20-257			PANEL 16	
					DOCK TRGT SW - OFF	016S001
					UTIL PWR SW - OFF	016S003
					COAS PWR SW - OFF	016S002
		20-258			PANEL 275	
					ALL CB'S CLOSED EXCEPT..	
					MNA BAT C CB - OPEN	275C011
					MNB BAT C CB - OPEN	275C012
					FLT/PL	
					BAT BUS A CB - OPEN	275C007
					BAT BUS B CB - OPEN	275C008
					BAT C CB - OPEN	275C013

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-259			PANEL 276	

					ALL CB'S - CLOSED	
		20-260			PANEL 278	

					ALL CB'S CLOSED EXCEPT..	
					UPRIGHTING SYSTEM	
					COMPRESSOR 1 CB - OPEN	278C001
					COMPRESSOR 2 CB - OPEN	278C002
					PANEL 5	

					FC PUMPS	
					1 SW - AC 1	005S001
					2 SW - AC 2	005S002
					3 SW - AC 2	005S003
					G/N PWR SW - AC1	005S012
					MN BUS TIE	
					BAT A/C SW - OFF	005S004
					BAT B/C SW - OFF	005S005
					BAT CHGR SW - AC1	005S006
					NON ESS BUS SW - OFF	005S009
					INTERIOR LT	
					INTGL CONT - OFF	
					FLOOD CONT - OFF	
					FLOOD DIM SW - 1	005S010
					FLOOD FIXED SW - OFF	005S011
					ALL CB'S CLOSED EXCEPT..	
					INST	
					NON ESS INST CB - OPEN	005C022
					SC 1 EQUIP SEB 1 CB - OPEN	005C023
					SCI EQUIP SEB 2 CB - OPEN	005C024
					SCI EQUIP HATCH CB - OPEN	005C025
					WASTE H2O/UR DUMP	
					MNA CB - OPEN	005C050
					MNB CB - OPEN	005C051

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-261			PANEL 4	
					SPS GAUGING SW - AC1	004S003
					TELE COM	
					GRP 1 SW - AC1	004S004
					GRP 2 SW - AC2	004S005
					ECS GLY PUMPS SEL - 1AC 1	004S002
					SUIT COMPR	
					1 SW - OFF	004S006
					2 SW - OFF	004S007
					ALL CB'S CLOSED	
		20-262			PANEL 3	
					FC RAD	
					1 SW - CENTER	003S002
					2 SW - CENTER	003S003
					3 SW - CENTER	003S004
					1 TB - GRAY	
					2 TB - GRAY	
					3 TB - GRAY	
					FC HTRS	
					1 SW - AUTO	003S006
					2 SW - AUTO	003S007
					3 SW - AUTO	003S008
					FC PURGE	
					1 SW - OFF (CENTER)	003S011
					2 SW - OFF (CENTER)	003S012
					3 SW - OFF (CENTER)	003S013

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		20-262			FC REAC		
					1 SW - CENTER	003S020	
					2 SW - CENTER	003S021	
					3 SW - CENTER	003S022	
					1 TB - GRAY		
					2 TB - GRAY		
					3 TB - GRAY		
					FC MN BUS A		
					1 SW - CENTER	003S014	
					2 SW - CENTER	003S015	
					3 SW - CENTER	003S016	
					1 TB - BP		
					2 TB - BP		
					3 TB - BP		
					MN BUS A RESET SW - (CENTER)	003S017	
					FC MN BUS B		
					1 SW - CENTER	003S023	
					2 SW - CENTER	003S023	
					3 SW - CENTER	003S024	
					1 TB - BP		
					2 TB - BP		
					3 TB - BP		
					MN BUS B RESET SW - (CENTER)	003S026	
					FC IND SEL - 1	003S010	
					FC FLOW H2 IND LB/HR -----		ENG INFO
					FC FLOW 02 IND LB/HR -----		ENG INFO
					FC MODL TEMP SKIN IND DEG. F. -----		ENG INFO
					FC MODL TEMP COND EXH IND DEG. F. -----		ENG INFO
					PH HI TB - GRAY		
					FC RAD TEMP LOW TB - GRAY		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION			REMARKS
		20-262			FC IND SEL - 2		003S010	
					FC FLOW H2 IND	LB/HR		ENG
					-----			INFO
					FC FLOW 02 IND	LB/HR		ENG
					-----			INFO
					FC MODL TEMP SKIN IND			ENG
					DEG. F.			INFO

					FC MODL TEMP COND EXH IND			ENG
					DEG. F.			INFO

					PH HI TB - GRAY			
					FC RAD TEMP LOW TB - GRAY			
					FC IND SEL - 3		003S010	
					FC FLOW H2 IND	LB/HR		ENG
					-----			INFO
					FC FLOW 02 IND	LB/HR		ENG
					-----			INFO
					FC MODL TEMP SKIN IND			ENG
					DEG. F.			INFO

					FC MODL TEMP COND EXH IND			ENG
					DEG. F.			INFO

					PH HI TB - GRAY			
					FC RAD TEMP LOW TB - GRAY			
					BAT CHARGE SEL - OFF		003S028	
					DC IND SEL - FUEL CELL 1		003S027	
					DC AMPS IND	AMPS		ENG
					-----			INFO
					DC IND SEL - FUEL CELL 2		003S027	
					DC AMPS IND	AMPS		ENG
					-----			INFO
					DC IND SEL - FUEL CELL 3		003S027	
					DC AMPS IND	AMPS		ENG
					-----			INFO
					DC IND SEL - MAIN BUS A		003S027	
					DC VOLTS IND	VDC		29
					-----			+/- 2
					DC IND SEL - MAIN BUS B		003S027	
					DC VOLTS IND	VDC		29
					-----			+/- 2

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		20-262			DC IND SEL - BAT BUS A	003S027	
					DC VOLTS IND VDC		35.5
					-----		+/- 2.5
					DC AMPS IND AMPS		3 MAX

					DC IND SEL - BAT BUS B	003S027	
					DC VOLTS IND VDC		35.5
					-----		+/- 2.5
					DC AMPS IND AMPS		3 MAX

					DC IND SEL - BAT C	003S027	
					DC VOLTS IND VDC		35.5
					-----		+/- 2.5
					DC AMPS IND AMPS		3 MAX

					DC IND SEL - PYRO A	003S027	
					DC VOLTS IND VDC		35.5
					-----		+/-2.5
					DC IND SEL - PYRO B	003S027	
					DC VOLTS IND VDC		35.5
					-----		+/-2.5
					DC IND SEL - MAIN BUS A	003S027	
					INV 1 SW - MNA	003S057	
					INV 2 SW - MN B	003S058	
					INV 3 SW - OFF	003S059	
					INV 1 AC BUS 1 SW - (ON-UP)	003S060	
					INV 2 AC BUS 1 SW - OFF	003S061	
					INV 3 AC BUS 1 SW - OFF	003S062	
					AC BUS 1 RESET SW - (CENTER)	003S063	
					INV 1 AC BUS 2 SW - OFF	003S064	
					INV 2 AC BUS 2 SW - (ON - UP)	003S065	
					INV 3 AC BUS 2 SW - OFF	003S066	
					AC BUS 2 RESET SW - (CENTER)	003S067	
					AC IND SEL - BUS 1 PH A	003S068	
					AC VOLTS IND VAC		115
					-----		+/- 5
					AC IND SEL - BUS 1 PH B	003S068	
					AC VOLTS IND VAC		115
					-----		+/- 5
					AC IND SEL - BUS 1 PH C	003S068	
					AC VOLTS IND VAC		115
					-----		+/- 5
					AC IND SEL - BUS 2 PH A	003S068	
					AC VOLTS IND VAC		115
					-----		+/- 5

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		20-262			AC IND SEL - BUS 2 PH B	003S068	
					AC VOLTS IND VAC		115 +/- 5
					AC IND SEL - BUS 2 PH C	003S068	
					AC VOLTS IND VAC		115 +/- 5
					SPS PRPLNT TK TEMP IND DEG. F.		60 - 90
					SPS PRPLNT TK PRESS FUEL IND PSIA		200 MAX
					SPS PRPLNT TK PRESS OXID IND PSIA		200 MAX
					SPS PRESS IND SW - HE	003S069	
					SPS PRPLNT TK PRESS HE IND PSIA		3800 MAX
					SPS PRESS IND SW - N2A	003S069	
					SPS PRPLNT PRESS N2 IND PSIA		2900 MAX
					SPS PRESS IND SW - N2B	003S069	
					SPS PRPLNT TK PRESS N2 IND PSIA		2900 MAX
					SPS ENG INJ VLV A1 IND - CLOSE		
					A2 IND - CLOSE		
					B3 IND - CLOSE		
					B4 IND - CLOSE		
					SPS QTY OXID FLOW VLV TB (UPPER) - GRAY		
					OXID FLOW VLV TB (LOWER) - GRAY		
					TEST SW - (CENTER)	003S101	
					OXID FLOW VLV INCR SW - NORM	003S104	
					PRIM SW - PRIM	003S103	
					PUG MODE SW - NORM	003S102	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		20-262			SPS HE VLV		
					1 TB - BP		
					2 TB - BP		
					1 SW - AUTO	003S018	
					2 SW - AUTO	003S019	
					SPS LINE HTRS SW - (OFF-CENTER)	003S075	
					SPS PRESS IND SW - HE	003S069	
					VHF ANT SEL - SM LEFT	003S001	
					S-BAND NORM		
					XPNDR SW - OFF	003S029	
					PWR AMPL PRIM SW - PRIM	003S031	
					PWR AMPL HI SW - (CENTER)	003S032	
					MODE		
					VOICE SW - VOICE	003S033	
					PCM SW - PCM	003S034	
					RNG SW - RANGING	003S035	
					S BAND AUX		
					TAPE SW - (OFF-CENTER)	003S036	
					TV SW - (OFF-CENTER)	003S037	
					UP TLM		
					DATA SW - DATA	003S038	
					CMD SW - OFF	003S039	
					PWR AMPL TB - BP		
					TAPE MOTION TB - BP		
					S BAND ANT		
					OMNI A SW - B	003S041	
					OMNI SW - OMNI	003S040	
					VHF AM		
					SQUELCH A TW - AS IS		
					SQUELCH B TW - AS IS		
					A SW - (OFF-CENTER)	003S043	
					B SW - (OFF-CENTER)	003S044	
					RCV ONLY SW - (OFF-CENTER)	003S071	
					VHF BCN SW - OFF	003S045	
					VHF RNG SW - OFF	003S078	*2
					FC REACS VLV SW - NORM	003S076	
					H2 PURGE LINE HTR SW - OFF	003S077	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		20-262			TAPE RCDR		
					PCM/ANLG SW - PCM/ANLG	003S049	
					RCD SW - RECORD	003S050	
					FWD SW - REWIND	003S051	
					NOTE		
					ALLOW TAPE TO RUN TO E.O.T.		
					TAPE RCDR FWD SW - (OFF - CENTER)	003S051	
					PWR SCE SW - NORM	003S052	
					PWR PMP SW - NORM	003S053	
					PCM BIT RATE SW - HIGH	003S055	
		20-263 MTPE	SLMP		PANEL 2 (RH)		
					MSN TIMER SW - RESET, REL	002S100	
					MSN TIMER IND ZERO		
					MSN TIMER SW - START	002S100	
					MSN TIMER IND COUNTING UP		
					MSN TIMER		
					HRS SW - (CENTER)	002S101	
					MIN SW - (CENTER)	002S102	
					SEC SW - (CENTER)	002S103	
					C/W		
					NORMAL SW - ACK	002S007	
					CSM SW - CSM	002S008	
					PWR SW - 1	002S009	
					LAMP TEST SW - (CENTER)	002S079	
					PL VENT VLV CONT - (PUSH, LOCK)		
					CRYO TK		
					PRESS H2 1 IND ----- PSIA		265 MAX
					PRESS H2 2 IND ----- PSIA		265 MAX

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION			REMARKS
		20-263			02 PRESS IND SW - SURGE TANK		002S016	
					CRYO TK PRESS 02 1 IND	PSIA		950 MAX
					02 PRESS IND SW - TK 1		002S016	
					CRYO TK PRESS 02 1 IND	PSIA		950 MAX
					CRYO TK PRESS 02 2 IND	PSIA		950 MAX
					QTY H2 1 IND	PCNT		
					QTY H2 2 IND	PCNT		
					QTY 02 1 IND	PCNT		
					QTY 02 2 IND	PCNT		
					CABIN FAN 1 SW - (ON - UP)		002S029	
					CABIN FAN 2 SW - (ON - UP)		002S030	
					TIME			
					H2 HTRS 1 SW - AUTO		002S012	
					H2 HTRS 2 SW - AUTO		002S013	
					02 HTRS 1 SW - AUTO		002S014	
					02 HTRS 2 SW - AUTO		002S015	
					02 PRESS IND SW - SURGE TANK		002S016	
					H2 FANS 1 SW - AUTO		002S017	
					H2 FANS 2 SW - AUTO		002S018	
					02 FANS 1 SW - AUTO		002S019	
					02 FANS 2 SW - AUTO		002S020	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		20-263			ECS IND SEL - PRIM	002S089	
					ECS RAD TEMP PRIM/SEC IN IND DEG. F.		
					ECS RAD TEMP PRIM OUT IND DEG. F.		
					GLY EVAP PRIM TEMP OUT IND DEG. F.		
					GLY EVAP STEAM PRESS IND PSIA		
					GLY DISCH PRESS IND PSIG		60 MAX
					TEMP SUIT IND DEG. F.		
					TEMP CABIN IND DEG. F.		
					PRESS SUIT IND PSIA		
					PRESS CABIN IND PSIA		
					C02 PART PRESS IND MMHG		
					ECS RAD FLOW CONT AUTO SW - AUTO	002S084	
					TB - GRAY		
					FLOW CONT PWR - (CENTER)	002S085	
					MAN SEL SW - RAD 1	002S086	
					HTR PRIM SW - OFF	002S087	
					HTR SEC SW - OFF	002S088	
					SUIT COMPR DP IND PSI		
					ACCUM PRIM/SEC QTY IND PCNT		
					H20 QTY IND SW - WASTE	002S056	
					H20 QTY IND PCNT		
					H20 QTY IND SW - POT	002S056	
					H20 QTY IND PCNT		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-263			POT H2O HTR SW - OFF	002S042
					SUIT CKT	
					H2O ACCUM AUTO SW - (CENTER)	002S051
					H2O ACCUM ON SW - CENTER	002S052
					HEAT EXCH SW - CENTER	002S057
					SEC COOL LOOP	
					EVAP SW - RESET FOR 58 SEC MINIMUM, THEN (OFF CENTER)	002S053
					PUMP SW - (OFF CENTER)	002S054
					GLY EVAP	
					TEMP IN SW - MAN	002S061
					STEAM PRESS AUTO SW - MAN	002S059
					STEAM PRESS INCR SW - INCR, FOR 58 SEC MINIMUM, THEN DEC 8.5 +/- .5 SEC, THEN REL	002S060
					H2O FLOW SW - (OFF CENTER)	002S058
					CABIN TEMP	
					SW - MAN	002S062
					TW - MAX DECR	
					HIGH GAIN ANT	
					PWR SW - OFF	002S076
					TRACK SW - AUTO	002S077
					BEAM SW - WIDE	002S090
					PITCH IND - ___ DEG.	
					YAW IND - ___ DEG.	
					PITCH POS CONT - AS IS	
					YAW POS CONT - AS IS	
					SERVO ELEC SW - PRIM	002S083
		20-264			SIDE HATCH AREA	
					CABIN PRESS DUMP VLV- CLOSE (CW) AND LOCK.	
		20-265	MTPE	MSTC	MDC SWITCHLIST COMPLETE.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-10 15		20-266			MSS STARTS MOVING AWAY (L/V)	
		20-267			(DELETED)	
		20-268	MSTC	HFLT	GIVE STATUS FOR LAUNCH MISSION E-MEMORY LOAD. IDENTIFY ANY MEMORY LOCATIONS THAT WILL NON-VERIFY TO MGNS ON CH 215.	
		20-269	MSTC	MGNS	PERFORM E-MEMORY VERIFY PER SEQ 11 V2.	
		20-270			NOTE ALL COUNTDOWN CLOCK INDICATORS INDICATORS ON ML DISABLED AT T-10 00.	
					NOTE MSS MUST BE CLEAR OF THE VEHICLE BEFORE PROCEEDING WITH RF TESTS.	
-09 35	111	20-271	MSTC	CVTS	1. VERIFY CLEARANCE FOR SC RF.. S-BAND VHF-AM	
					2. CSM CMD DECODER IS OFF	
					3. HAVE GMIL AND HFLT PROVIDE SUPPORT ON CH 212.	
					4. CSM VERIFIES CCS NOT ENABLED	
	222	20-272	MTPE	SLMP	55. VERIFY CIF MSO PCM H/L OPER. *2 PANEL 3 S BAND NORM XPNDR SW - PRIM 003S029 S BAND NORM PWR AMPL HI Sw - HIGH 003S032 VHF AM B SW - DUPLEX 003S044	
				SLMP	S-BAND PA TB - GRAY (90 SEC DELAY)	

196 16 43 33

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-273	MSTC	GMIL	1. VERIFY 2-WAY LOCK (AFTER 90 SEC) AT -70 DBM. 2. VERIFY READY FOR A/G VOICE CHECKS ON S-BAND AND VHF-AM DUPLEX B. 3. ENABLE ACS S-BAND AND VHF-AM DUPLEX B CIRCUITS 4. VERIFY SYNC ON A/B PCM.	MODE 6.2.0
		20-274	MTPE	SLMP	VERIFY S-BAND ANT IND GREATER THAN 1/3 SCALE.	
		20-275	MSTC	HFLT	VERIFY READY FOR A/G VOICE CHECKS	
		20-276	MTPE	CSTO	1. PUT CH 223 ON UMBILICAL 2. PUT CSM CH 212 ON S-BAND.	
-09 30	222	20-277	MTPE	SCDR	PANEL 9	
					MODE SW - ICOM/PTT 009S001 PAD COMM SW - T/R 009S003 PWR SW - AUDIO/TONE 009S006 SUIT PWR SW - (ON-UP) 009S007 INTERCOM SW - T/R 009S005 VHF AM SW - T/R 009S004 S BAND SW - T/R 009S002 AUDIO CONTROL SW - NORM 009S008 MASTER VOLUME TW - 5 VHF RNG RESET SW - NORM 009S009	*2
		20-278	MTPE	SCMP	PANEL 10	
					MODE SW - ICOM/PTT 010S001 PAD COMM SW - T/R 010S003 PWR SW - AUDIO/TONE 010S006 SUIT PWR SW - (ON-UP) 010S007 INTERCOM SW - T/R 010S005 VHF AM SW - T/R 010S004 S BAND SW - T/R 010S002 AUDIO CONTROL SW - NORM 010S008 MASTER VOLUME TW - 5	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-279	MTPE	SLMP	PANEL 6	
					MODE SW - ICOM/PTT	006S001
					PAD COMM SW - T/R	006S003
					PWR SW - AUDIO/TONE	006S006
					SUIT PWR SW - (ON-UP)	006S007
					INTERCOM SW - T/R	006S005
					VHF AM SW - T/R	006S004
					S BAND SW - T/R	006S002
					AUDIO CONTROL SW - NORM	006S008
					MASTER VOLUME TW - 5	
		20-280	MTPE	SCDR SLMP	REPLACE OIS HEADSETS WITH ASTRO HEADSET.	
		20-281	MTPE	MSTC CSTO MCSE MNQC	REPORT TO CH 212 FOR COMM CKS.	
		20-282	MSTC	SCDR SLMP	PERFORM PAD COM CHECK (VIA UMBILICAL CH 223). ADJUST PAD COM VOLUME LEVEL.	
					SCDR TW _____ SLMP TW _____.	
		20-283	MSTC	SLMP	ADJUST VHF AM A SQUELCH AS REQUIRED FOR MIN NOISE AND INCREASE TW ONE NUMBER.	
					RECORD TW SETTING _____.	
		20-284	MSTC	CSTO	RELEASE UMBILICAL.	
		20-285	MSTC	SCDR SLMP	PERFORM COMM CHECK ON CH 212 (VIA S BAND.) ADJUST S-BAND VOLUME LEVEL.	
					SCDR TW _____ SLMP TW _____.	
		20-286	MSTC	CSTO	1. PUT CSM CH 214 ON VHF 2. RELEASE S-BAND	
		20-287	MSTC	SCDR SLMP	PERFORM COMM CHECK ON CH 214 (VIA VHF AM) ADJUST VHF AM VOLUME LEVEL.	
					SCDR TW _____ SLMP TW _____.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-288	MSTC	CSTO	1. PUT CSM CH 214 ON UMBILICAL. 2. RELEASE VHF	
		20-289	MSTC	SCDR	1. RETURN TO OIS HEADSETS. 2. REPORT TO MTPE ON CH 222	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-290	MSTC	SLMP	DON SCMP ASTRO HEADSET.	
		20-291	MSTC	GMIL	CONFIGURE FOR UP VOICE B/U MODE 8.2.0.	
		20-292	MSTC	SLMP	PANEL 3 UPTLM DATA SW - UP VOICE B/U ESTABLISH 2-WAY COMM WITH HFLT ON S-BAND.	
		20-293	MSTC	HFLT	VERIFY UP VOICE B/U CHECKS COMPL.	
		20-294	MSTC	SLMP	PANEL 3 UPTLM DATA SW - DATA	
		20-295	MSTC	GMIL	CONFIGURE FOR DN VOICE B/U MODE 6.16.0.	
		20-296	MSTC	SLMP	PANEL 3 S-BND AUX TAPE SW - DN VOICE B/U ESTABLISH 2-WAY COMM WITH HFLT ON S-BAND.	
		20-297	MSTC	HFLT	VERIFY DN VOICE B/U CHECKS COMPL.	
		20-298	MSTC	SLMP	PANEL 3 S-BND AUX TAPE SW - OFF	
		20-299	MSTC	GMIL	CONFIGURE FOR S-BND MODE 6.2.0.	
		20-300	MSTC		PERFORM 2-WAY VOICE CHECK WITH SCMP USING VHF BACK-UP TRANSCEIVER.	
		20-301	MSTC	HFLT	PERFORM COMM CHECK WITH SCMP ON VHF.	
		20-302	MSTC	HFLT	PERFORM COMM CHECK WITH SCMP ON S-BAND.	
		20-303	MSTC	GMIL	1. ENABLE VHF + S-BAND ACS CIRCUITS. 2. DISABLE S-BAND ACS UPLINK. 3. ENABLE VHF-S-BAND SIMUL CAPABILITY. 4. ENABLE VHF U/L CONSTANT KEY	
		20-304	MSTC		RELEASE AUDIO PUSH BUTTONS AND PERFORM 2-WAY VOICE COMM WITH SLMP USING EMER UMB.	
		20-305	MSTC	CSTO	PUT S-BAND ON CH 212. PUT VHF ON CH 214	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-306	MSTC		PERFORM 2-WAY VOICE COMM CK WITH SCMP ON CH 214.	
		20-307	MSTC	MTPE	VERIFY SCMP VOICE ON CH 212.	
		20-308	MSTC	HFLT	PERFORM COMM CHECK WITH SCMP ON VHF AND S-BAND SIMULTANEOUSLY.	
		20-309	MSTC	GMIL	RELEASE VHF/S-BAND SIMUL CAPABILITY.	
		20-310	MSTC	SLMP	RETURN TO OIS HEADSET. REPORT TO MTPE ON CH 222	
		20-311	MSTC	CSTO	RELEASE UMBILICAL, VHF AND S-BAND	
		20-312	MSTC	MCSE CSTO MNQC	RETURN TO CH 222	
		20-313	MTPE	SCDR	PANEL 9	
					SUIT PWR SW - OFF	009S007
					PWR SW - OFF	009S006
					DISCONNECT ASTRO HEADSET AND HAND TO SPAD. DISCONNECT CWG ELECTRICAL ADAPTER FROM CCU.	
		20-314	MTPE	SCMP	PANEL 10	
					SUIT PWR SW - OFF	010S007
					PWR SW - OFF	010S006
					MASTER VOL TW - 6 INT VOL TW - 6 S-BND VOL TW - 6 VHF VOL TW - 7 DISCONNECT ASTRO HEADSET AND HAND TO SPAD. DISCONNECT CWG ELECTRICAL ADAPTER FROM CCU.	
		20-315	MTPE	SLMP	PANEL 6	
					SUIT PWR SW - OFF	006S007
					PWR SW - OFF	006S006
					DISCONNECT ASTRO HEADSET AND HAND TO SPAD. DISCONNECT CWG ELECTRICAL ADAPTER FROM CCU.	
		20-316	MTPE	SCMP	PANEL 2	
					STATUS C/W LITES C/W PWR SW - (OFF, CTR)	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-317	MTPE	SLMP	PANEL 5	
					C/W MNA CB - OPEN	005C052
					C/W MNB CB - OPEN	005C053
		20-318	MTPE	SCMP	**PASS 3 EA. CWG ADAPTERS TO SPAD**	*2
		20-319	MTPE	GMIL	1. RELEASE VHF U/L CONSTANT KEY 2. RELEASE ACS BHF AND S-BAND CIRCUITS.	
		20-320	MTPE	SLMP	EGRESS FROM COMMAND MODULE	
		20-321	MTPE	SNQC SGQC	VERIFY LUT-PAD INSPECT PER T/S 8.2.10.5.1 COMPLETE.	------ ------- NR QC NASA QC
		20-322	MTPE	SCMP SPAD	PREP CABIN FOR FLIGHT CREW INGRESS.	

TIME	COMM CM	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-323	MTPE	SPAD	CLEAR PAD OF ALL NON-ESSENTIAL SC PERSONNEL	

NOTE

ESSENTIAL PERSONNEL ARE..

SA-9	PAD APRON
SPAD	VEHICLE DRIVER (1)
SLMP	
SCMP	+80 FT
SCMT	------
SNQC	UGCU
SGQC	UWGR

20-324 SCMP — PROCEEDS AS FOLLOWS..

1. CREW ASSIST BAR ON MDC EXTENDED AND LOCKED
2. COUCH HEAD RESTS IN VENTILATED SUIT POSITION
3. THC ARM REST TO LAUNCH POSITION AND LOCKED
4. COUCH INBOARD ARM RESTS/CONTROLLERS STOWED AND LOCKED
5. CREW COUCHES WITH Y-Y STRUTS EXTENDED AND LOCKED
6. COUCH SEAT PANS IN 85 DEG POSITION AND LOCKED
7. 02 UMBILICALS, CCU CONTROL HEADS AND CCU CABLES STOWED.
8. SHOULDER HARNESSES UNLOCKED AND RESTRAINT STRAPS LAID ASIDE, EXTENDED AND SNAPPED IN PLACE
9. COUCH STABILIZATION LINK - STOWED
10. EGRESS CM.

20-325 CVTS MSTC — SMDPS IS IN 1 SW/1 VLV MODE

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-09 00		20-326			*** BUILT-IN HOLD ***	
					NOTE BUILT-IN HOLD OF 6 HOURS (MAX) TO BE UTILIZED AS A NON-SCHEDULED WORK PERIOD. PREVIOUS ACCUMULATED HOLD TIMES WILL REDUCE THIS HOLD BY A CORRESPONDING PERIOD.	*1
		20-327			(DELETED)	*1
					NOTE THE FOLLOWING SEQ SHOULD BE PERFORMED APPROX 1 HOUR BEFORE END OF BUILT-IN HOLD.	
		20-328	MSTC	SPAD	NOTE WITH EEAP BREATHING UNIT, PERFORM COMM CHECK WITH CVTS ON RF/POINT-TO-POINT NET DESIGNATED EMERGENCY EGRESS NO. 1.	
		20-329	MSTC	CVTS	STANDBY FOR RF COMM CHECK WITH SPAD USING EEAP.	
		20-330	MTPE	MECE UGCU UWGR	1. PROCEED WITH ECS CHILLDOWN PER SEQ 50V2. 2. USE CH 227 FOR COORDINATION. 3. REPORT COMPLETION ON CH 222.	
-09 00					*** RESUME COUNT ***	
		20-331	CVTS	MSTC	VERIFY ASTRONAUT STOOL LOCATED IN ELEV NO. 1.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-332	MTPE	SPAD	1. VERIFY CABIN PREPS COMPLETE 2. CLOSE CM HATCH AND BPC HATCH PER T/S 8.2.11.3.1 AND 8.2.11.3.2 3. REPORT COMPLETION AND STATUS FOR CLEARING PAD.	----- NR QC ------- NASA QC
		20-333	MTPE	MECS	VERIFY ECS CHILLDOWN COMPLETE.	
		20-334	MSTC	CVTS	CHANGE SMDPS FROM 1 SW/1 VLV TO 1 SW.	
		20-335	MTPE	ALL	GIVE STATUS FOR ACCESS ARM CLEARING.	

NOTE
THIS IS FINAL SC STATUS
PRIOR TO L/V TANKING

MECS _____	MRCS _____
MLFC _____	MACE _____
MEPS _____	MBSE _____
MGNS _____	MREC _____
MSCS _____	MCSE _____
MSPS _____	SPAD _____
	SCMP _____
	SLMP _____

		20-336	MTPE	SPAD	1. CLEAR ACCESS ARM AND UMBILICAL TOWER OF ALL PERSONNEL 2. STAND BY IN FALL BACK AREA FOR RETURN TO PAD AT -03 25. 3. PROTECTIVE CLOTHING REQUIRED FOR CLOSEOUT CREW UPON RETURN TO PAD. (REF. SEC 1, PARA. 5.6).	

NOTE

CREW MUST BE CLEAR OF LUT BY
T-08 15 AND CLEAR OF PAD BY
T-08 00.

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
-08 30		20-337	MSTC	CVTS	CSM PERSONNEL ARE CLEARING THE COMPLEX	
-08 15		20-338			L/V STARTS TANKING. (L/V)	
-04 30		20-339	MSTC	MGNS	PERFORM CMC DELTA TIME CHECK ON CH 215.	
		20-340	MSTC	HFLT	REQUEST NEW AZIMUTH OR VERIFY OLD AZIMUTH CORRECT.	
					NOTE IF NEW AZIMUTH DESIRED, PERFORM THE FOLLOWING..	
				HFLT	NEW AZIMUTH + -----	
		20-341	MSTC	MGNR	K148 INSERT V78E V21E + (NEW AZ) ----- ENTER V33E	
		20-342	MSTC	BSCMP	VERIFY THAT MICRO BIOLOGICAL SAMPLING KIT ( ) IS AVAILABLE FOR TAKING ----- SAMPLES AFTER INGRESS AT T-02 50.	
	113	20-343	MSTC	BOTV	PATCH CAMERAS TO MSOB CONTROL ROOM MONITORS AS FOLLOWS.. CAMERA 7 - MON 1, 4, 7 CAMERA 25 - MON 2, 5, 8, 10 CAMERA 26 - MON 3, 6, 9 CAMERA 37 - MON 11 INITIATE VIDEO RECORDING OF CAMERA 25 AT T-03 10.	
		20-344	MSTC	HFLT	GIVE STATUS FOR LAUNCH/MISSION E-MEMORY LOAD. IDENTIFY E-MEMORY LOCATIONS THAT WILL NON-VERIFY.	
					NOTE IF CHANGES REQUIRED, PERFORM	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-344			E-MEMORY LOAD PER SEQ. 11 V2	
		20-345	MSTC	MACE	VERIFY G+N DOWNLINK BEING FILED ON BACKUP COMPUTER UPLINK COMMAND FILE TAPE.	
-04 15		20-346	MSTC	MGNS	PERFORM E-MEMORY VERIFY PER SEQ 11V2 ON CH 215.	
		20-347	MSTC	MLFC	PERFORM FUEL CELL PURGE AT YOUR DISCRETION	
-04 11		20-348			NOTE Q-BALL POWER ON	
		20-349	MGNS	MTPE	E-MEMORY VERIFY COMPLETE. REQUEST MACE PROVIDE UPLINK COMMAND FILE PRINTOUT (DYNAMES 4 AND 12) FROM ----- TO ----- GMT	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-03 30		20-350			L/V TANKING COMPLETE (L/V)	
					NOTE COMPLEX OPENED WHEN CONDITIONING COMPLETE (T-03 25)	
-03 25		20-351	CVTS	MSTC	CONTROL AREA IS NOW OPEN FOR CLOSEOUT OPERATIONS.	
		20-352	MSTC	CVTS	DISPATCH CLOSEOUT CREW TO SA-9 FROM MSS PARKSITE.	
					NOTE FOLLOWING SC PERSONNEL REQUIRED ON STATION.. SA-9 ---- SPAD BCMP SCMT SGQC	
		20-353	MSTC	MLFC MECS	PROCEED WITH FOLLOWING READOUTS	
					NOTE FOLLOWING READOUTS WILL BE READ AGAIN AFTER INGRESS TO VERIFY MDC SWITCHES WERE NOT BUMPED DURING INGRESS.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		20-354 MLFC			FC1 CONDENSER (P13-5) -----	DEG. F.	SC2081
					FC2 CONDENSER (P13-5) -----	DEG. F.	SC2082
					FC3 CONDENSER (P13-5) -----	DEG. F.	SC2083
					FC1 STACK TEMP (P13-6) -----	DEG. F.	SC2084
					FC2 STACK TEMP (P13-6) -----	DEG. F.	SC2085
					FC3 STACK TEMP (P13-6) -----	DEG. F.	SC2086
					FC1 H2 FLOW (P13-9) -----	LB/HR	SC2139
					FC2 H2 FLOW (P13-9) -----	LB/HR	SC2140
					FC3 H2 FLOW (P13-9) -----	LB/HR	SC2141
					FC1 02 FLOW (P13-10) -----	LB/HR	SC2142
					FC2 02 FLOW (P13-10) -----	LB/HR	SC2143
					FC3 02 FLOW (P13-10) -----	LB/HR	SC2144
					FC1 CURRENT OUT (P13-11) -----	AMPS	SC2113
					FC2 CURRENT OUT (P13-11) -----	AMPS	SC2114
					FC3 CURRENT OUT (P13-11) -----	AMPS	SC2115
		20-355 MECS			H20 WAST Q -----	PCNT (P8-20)	CF0009

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-356	MSTC	CSTO	PUT CSM S/C TC ON VHF.	
		20-357	MSTC	ALL	GIVE CREW DEPARTURE STATUS. MECS ----- MLFC ----- MEPS ----- MGNS MSCS ----- MSPS ----- MRCS ----- MACE ----- MBSE ----- MREC ----- MCSE ----- MTPE ----- CSTO ----- HFLT -----	
		20-358	MSTC	CVTS	VERIFY GO FOR CREW DEPARTURE FROM MSOB.	
-03 15		20-359	CVTS	MSTC	GMIL SWITCHING TO 212 FOR ANTENNA ALIGNMENT.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-05 10		20-360	SPAD	MSTC	1.CLOSEOUT CREW ON STATION. 2.ONE RESUSCITATOR FROM ML RESCUE LOCKER AND ONE EEAP FROM HOLDER POSITIONED ON W/R HOOD TO RIGHT OF CM HATCH.	*1
					NOTE FOLLOWING OPERATION REFERENCES A STATION ASSIGNMENT. FUNCTION WILL BE PERFORMED BY SPAD OR HIS DESIGNEE.	
		20-361	MSTC	SPAD	OPEN CM HATCH AND BPC HATCH PER TEST SETUP 8.2.11.3.3 REPORT COMPLETION.	------- NASA QC
		20-362	SPAD	MSTC	CM HATCH IS OPEN.	
		20-363	MSTC	BCMP	INGRESS CM.	
		20-364	MSTC	SPAD	PERFORM CABIN PURGE SETUP PER T/S 8.2.10.2.5 REPORT COMPLETION.	------- NASA QC
		20-365	MSTC	BCMP	PANEL 5 C/W MNA CB - CLOSE 005C052 C/W MNB CB - CLOSE 005C053 PANEL 2 C/W PWR SW - 1 RESET MASTER ALARM STATUS C/W LITES PANEL 3 S-BAND NORM PA HI SW - OFF S-BAND NORM XPNDR SW - OFF	
		20-366	MSTC	GMIL	SC S-BAND IS OFF.	
		20-367	MSTC	BCMP MECS MNQC	PERFORM CHLORINE AMPULE INJECTION PER SEQ 06 V2	
		20-367A	MSTC	MEPE	BUS A ISO CONTACTOR OPEN - ON KC7655 BUS B ISO CONTACTOR OPEN - ON KC7656	*2
		20-367B	MTPE	MEPS	APPLY FUEL CELLS TO SC BUSSES	*1
		20-368	MSTC	MECS	STARTING DIRECT O2 ADJUSTMENTS	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-369	MSTC	BCMP	PANEL 7	
					DIRECT 02 VLV OPEN (CCW) TO OBTAIN 0.6 TO 0.8 LB/HR.	
					PANEL 4	
					SUIT COMPR 1 SW - AC 1 (TIME _____)	004S007
		20-370	MSTC	BCMP	PANEL 2	
					SUIT COMPR DP _____ PSID	0.5 TO 0.9
					SUIT CAB DP _____ IN H20	
			MECE		RECORD COMPR DP _____ PSID	
					SUIT/CABIN DP _____ IN H20	CF0003
		20-371	MSTC	SLMP	PANEL 5, 8	
					TURN ON LIGHTING AS REQD	
		20-372	MSTC	SCDR	PANEL 2 DSKY INSERT KEY RELEASE VERIFY P02	
		20-373	MSTC	BCMP	REMOVE PYRO ARM SW LOCK AND GIVE TO SPAD. REPORT COMPLETION	------- NASA QC

NOTE

SPAD RETAIN LOCK FOR REINSTALLATION, IF REQ'D.

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-373			WARNING PYRO SWITCHES SHALL NOT BE ARMED UNTIL AUTHORIZED BY CVTS.	
		20-374	MSTC	CVTS	NOTIFY CPSS SPAD HAS PYRO ARM SW LOCK.	
		20-375	MSTC	SPAD	VERIFY COUNTER BALANCE HANDLE IS IN PRESS POSITION.	------- NASA QC
-02 50		20-376	MSTC	BCMP	PANEL 3 S-BAND NORM XPNDR SW - PRIM S-BAND NORM PA HI SW - HI	
		20-377	MSTC	GMIL	OBTAIN TWO WAY LOCK AT -70 DBM	6.20
		20-378	MSTC	GMIL	ENABLE VHF AND S-BAND ACS CIRCUITS. DISABLE S-BAND ACS UPLINK ENABLE VHF/S-BAND SIMUL CAPABILITY. ENABLE VHF U/L CONSTANT KEY.	
		20-379	MSTC	CSTO	PUT UMB ON CH 214. PUT VHF ON CH 214. PUT S-BAND ON CH 212.	
		20-380	MSTC	BCMP	PROCEED WITH TAKING MICROBIOLOGICAL SAMPLES.	
		20-381	MSTC	BCMP	INGRESS LEB TO SUPPORT CREW INGRESS	
		20-382	MSTC	SPAD	REPORT WHEN FLIGHT CREW ARRIVES.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-382			NOTE FOLLOWING SC PERSONNEL WILL BE ON PAD FOR CLOSE OUT (INCLUDING FLIGHT CREW). SA-9 ---- / PAD APRON --------- SPAD / VAN DRIVER SCDR / VAN ESCORT SCMP / PVSI SLMP SUIT TECH (2) BCMP SCMT SGQC	
-02 45		20-383	MSTC	ALL	GIVE CREW INGRESS STATUS. MECS ---------- MLFC ---------- MEPS ---------- MGNS ---------- MSCS ---------- MSPS ---------- MRCS ---------- MACE ---------- MBSE ---------- MREC ---------- MCSE ----------	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-383			SPAD ----------	
					MTPE ----------	
					MMED ----------	
					CSTO ----------	
					BCMP ----------	
		20-384	MSTC	SLMP	PANEL 2 SEC COOL LOOP PUMP - AC 1 (TIME) -----	
					NOTE SECONDARY COOLANT LOOP PUMP MAY BE CYCLED ON AND OFF TO CONTROL CREW COMFORT. NOTIFY MECS.	
-02 40		20-385	MSTC	SPAD	PROCEED WITH INGRESS. NARRATE INGRESS OPERATIONS ON CH 212. (ON A NON-INTERFERENCE BASIS)	
					NOTE SSSA IS THE NASA SPACE SUIT TECHNICIAN INSIDE CM. SSSB IS THE SUIT TECHNICIAN WHO WILL ESCORT CREW MEMBERS FROM TRANSFER VAN AND INGRESS CREW.	
					NOTE INGRESS SLIDE MAY BE USED TO SUPPORT CREW INGRESS AS REQUIRED.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-385			**WARNING** CABIN ATMOSPHERE WILL BE 02 ENRICHED DURING INGRESS AND FOLLOWING CLOSEOUT.	
		20-386	MSTC	BCMP MECS MNQC	PROCEED WITH DRINK GUN AND FOOD PREP VALVES CYCLING PER SEQ 06V2.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-386			NOTE SSSA - PRIOR TO EACH CREWMAN HOOKUP TO O2 UMBILICAL, WITH INTERCONNECT REMOVED, VERIFY OPEN NOZZLES FACE COMM CABLE. THEN ROTATE UMBILICAL ASSY (NOZZLES + COMM CABLE) TOWARD CREWMAN PRIOR TO NOZZLE HOOKUP. ENSURE NOZZLES ARE HOOKED UP BLUE TO BLUE AND RED TO RED	
		20-387	SSSA BCMP		INGRESS SCDR AS FOLLOWS.. 1. REMOVE BOOT PROTECTORS. 2. INGRESS INTO COUCH 3. CONNECT CCU TO PGA 4. SCDR PERFORMS FOLLOWING.. PANEL 9 SUIT PWR SW - (ON - UP) PWR SW - AUDIO/TONE 5. PANEL 301 SUIT FLOW VLV - OFF 6. REMOVE GAS CONNECTOR PLUGS FROM PGA AND RETAIN. 7. REMOVE SUIT CIRCUIT INTERCONNECT FROM COU. CONNECT COU TO PGA. RED TO RED, BLUE TO BLUE. 8. PANEL 301 SUIT FLOW VLV - FULL FLOW 9. REMOVE SUIT CKT INTERCONNECT FROM SC. SPAD RETAIN FOR REINSTALLATION, IF REQ'D. 10. POV FLOW - OFF 11. DISCONNECT POV HOSE FROM PGA AND REMOVE FROM SC. 12. INSTALL GAS CONNECTOR PLUGS INTO VACANT PGA CONNECTIONS. 13. POSITION SCDR SNUGLY INTO COUCH BY PUSHING SHOULDERS FIRMLY. 14. CONNECT RESTRAINT HARNESS, TIGHTEN RESTRAINT HARNESS SNUGLY. 15. POSITION ARM REST TO USE POSITION AND LOCK. 16. ADJUST TORSO TIE-DOWN AND REMOVE HELMET PROTECTOR. 17. VERIFY LIFE VEST PROPERLY POSITIONED.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		20-387	MBSE		ECG CDR	CJ0060	
					ZPN CDR	CJ0200	
			MECE		SUIT/CABIN DP IN/H2O	CF0003	
		20-388	SPAD	MSTC	SCDR INGRESS COMPLETE		
		20-389	MSTC	SCDR	PANEL 8 (VERIFY)		
					FLOAT BAG		
					1 SW - VENT	008S004	
					2 SW - VENT	008S005	
					3 SW - VENT	008S006	
					THC - NEUTRAL AND LOCKED		
					PANEL 1 (VERIFY)		
					MAN ATT		
					ROLL SW - RATE CMD	001S007	
					PITCH SW - ACCEL CMD	001S008	
					YAW SW - RATE CMD	001S009	
					SCS TVC		
					PITCH SW - AUTO	001S038	
					YAW SW - AUTO	001S039	
					ELS AUTO SW - (ON - UP)	001S063	
					DV CG SW - CSM	001S054	
					EVENT TIMER		
					RESET SW - CENTER	001S055	
					START SW - CENTER	001S056	
-02 30		20-390	SSSA BCMP		INGRESS SLMP AS FOLLOWS..		

1. REMOVE BOOT PROTECTORS.
2. INGRESS INTO COUCH
3. CONNECT CCU TO PGA
4. SLMP PERFORMS FOLLOWING..

   PANEL 6
   SUIT PWR SW - (ON - UP)
   PWR SW - AUDIO/TONE
5. PANEL 300 SUIT FLOW VLV - OFF
6. POV FLOW - OFF
7. DISCONNECT POV HOSE FROM PGA.

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-390			8. REMOVE SUIT CIRCUIT INTERCONNECT FROM COU. CONNECT COU TO PGA. RED TO RED, BLUE TO BLUE. 9. PANEL 300 SUIT FLOW VLV - SUIT FULL FLOW 10. REMOVE SUIT CKT INTERCONNECT FROM S/C. SPAD RETAIN FOR REINSTALLATION, IF REQ'D. 11. POSITION SCMP SNUGLY INTO COUCH BY PUSHING SHOULDERS FIRMLY. 12. CONNECT RESTRAINT HARNESS, TIGHTEN RESTRAINT HARNESS SNUGLY. 13. ADJUST TORSO TIE-DOWN AND REMOVE HELMET PROTECTOR. 14. VERIFY LIFE VEST PROPERLY POSITIONED.	
		20-391 SPAD	MSTC		SLMP INGRESS COMPLETE	
		20-392	MBSE		ECG LMP	CJ0062
					ZPN LMP	CJ0202
			MECE		SUIT/CABIN DP _____ IN/H20	CF0003
		20-393 MSTC	SLMP		PANEL 4 (VERIFY)	
					SPS GAUGING SW - AC1	004S003
					ECS GLY PUMPS SEL - 1 AC1	004S002
					PANEL 3 (VERIFY)	
					VHF ANT SEL - SM LEFT	003S001
					SPS QTY OXID FLOW VLV INCR SW - NORM	003S104
					MN BUS A RESET SW - (CENTER)	003S017
					SPS HE VLV	
					1 SW - AUTO	003S018
					2 SW - AUTO	003S019
					MN BUS B RESET SW - (CENTER)	003S026
					S-BAND ANT	
					OMNI A SW - B	003S041
					OMNI/D SW - OMNI	003S040
					VHF BCN SW - OFF	003S045
					PWR SCE SW - NORM	003S052
					AC BUS 1 RESET SW - (CENTER)	003S063
					AC BUS 2 RESET SW - (CENTER)	003S067

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
-02 20		20-394	SSSA BCMP		INGRESS SCMP AS FOLLOWS.. 1. REMOVE BOOT PROTECTORS. 2. INGRESS INTO COUCH 3. CONNECT CCU TO PGA 4. BCMP PERFORMS FOLLOWING.. PANEL 10 SUIT PWR SW - (ON - UP) PWR SW - AUDIO/TONE 5. PANEL 302 SUIT FLOW VLV - OFF 6. REMOVE GAS CONNECTOR PLUGS FROM PGA AND RETAIN. 7. REMOVE SUIT CIRCUIT INTERCONNECT FROM COU. CONNECT COU TO PGA. RED TO RED, BLUE TO BLUE. 8. PANEL 302 SUIT FLOW VLV - SUIT FULL FLOW. 9. REMOVE SUIT CKT INTERCONNECT FROM SC. SPAD RETAIN FOR REINSTALLATION, IF REQ'D. 10. POV FLOW - OFF 11. DISCONNECT POV HOSE FROM PGA AND REMOVE FROM SC. 12. INSTALL GAS CONNECTOR PLUGS INTO VACANT PGA CONNECTORS. 13. POSITION SLMP SNUGLY INTO COUCH BY PUSHING SHOULDERS FIRMLY. 14. CONNECT RESTRAINT HARNESS, TIGHTEN RESTRAINT HARNESS SNUGLY. 15. POSITION ARM REST TO USE POSITION AND LOCK. 16. ADJUST TORSO TIE-DOWN AND REMOVE HELMET PROTECTOR. 17. VERIFY LIFE VEST PROPERLY POSITIONED.	
		20-395	SPAD	MSTC	SCMP INGRESS COMPLETE	
		20-396		SSSA	VERIFY THE FOLLOWING FOR SCDR, SCMP AND SLMP A. HELMET LOCKED TO PGA B. COU CONNECTORS LOCKED TO PGA C. PGA DIVERTER VALVES POSITIONED D. CCU LOCKED TO PGA	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-396			E. RESTRAINT HARNESS SNUG AND SECURED	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-396			F. PGA WRIST DISCONNECTS LOCKED G. BOOT HEELS POSITIONED IN FOOT RESTRAINTS (FIT CHECK ONLY). H. LIFE VEST PROPERLY POSITIONED. I. UNSTOW X-X FOOT LOCKOUT STRUT LANYARD, SNAP TO UPPER PORTION OF LOCKOUT BOX AND HANDLE PORTION TO MDC NEAR EVA GUARD RAIL MOUNTS.	
		20-397	MSTC	SCMP	PANEL 2 ABORT SYS PRPLNT SW - DUMP AUTO 002S063 C/W NORMAL SW - BOOST 002S007 MSN TIMER SW - START 002S100 PANEL 2 (PERFORM) SUIT CKT H20 ACCUM AUTO SW - 1	
		20-398		MBSE	ECG CMP CJ0061 ZPN CMP CJ0201	
				MECE	SUIT/CAB DP IN H20 CF0003	
		20-399	MSTC	MMED	VERIFY MEDICAL DATA ACCEPTABLE FOR SCDR, SCMP, SLMP.	
		20-400	MSTC	HFLT	PERFORM A/G VOICE CHECK WITH SCMP ON VHF, SLMP ON S BND AND SCDR ON VHF AND S BND SIMUL.	
		20-401	MSTC	SCMP	PANEL 2 SUIT COMPR DP PSID	
				MECE	SUIT COMP DP IND PSID CF0015	.5 TO .9
-02	10	20-402	SPAD	SSSA	REMOVE GAS CONN PLUG AND INSERT AIRLOCK P/N 9168 INTO SCDR SPARE (INLET) BLUE FITTING AND MANIPULATE D2 ANALYZER TO OBTAIN STEADY 02 CONCENTRATION. MIN 02 ALLOWABLE 95 PERCENT. REMOVE P/N 9168. INSTALL SCDR GAS CONNECTOR PLUG.	NASA QC
		20-403		SSSA	EGRESS CM.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-403				
					NOTE IF LESS THAN 95 PCNT, SCDR OPEN DIRECT 02 FOR PURGE AS REQUIRED UNTIL 95 PCNT IS OBTAINED.	
		20-404		MECE	RECORD.. 02 FLOW RATE LB/HR SUIT TEMP DEG. F. C02 PART PRESS MM HG	CF0035 .7 +/- .1 CF0008 45-70 CF0005 7.6 MAX
-02 00	128	20-405	MSTC	CVTS	1. VERIFY LOM READY FOR AAS CHECKS AT T-01 55 ON CH 214. 2. EDS POWER COMING ON AT T-01 55. 3. CSM DECODER COMING ON. 4. REQUEST GMIL SUPPORT ON CH 214. 5. REQUEST HFLT STANDBY FOR CMD CKS	
	126	20-406	MSTC	GMIL	1. VERIFY TWO-WAY LOCK OF S-BAND (MODE 6.2.0). 2. COMMAND DECODER IS COMING ON.	
	127	20-407	MSTC	SLMP	PANEL 3 UP TLM CMD SW - NORM	
		20-408	MSTC	HFLT	EXECUTE ACE G+N UPLINK DISABLE (RTC 10, 14)	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-409	MSTC	MGNR	VERIFY NO VERB/NOUN FLASH ACTIVITY K148 INSERT V34	
				MGNR	NO V34 DISPLAY	
		20-410	MSTC	HFLT	DSKY INSERT	
					V34	
				MGNR	V34	
		20-411	MSTC	HFLT	EXECUTE E EXECUTE ERROR RESET	
		20-412	MSTC	HFLT	EXECUTE PCM DATA RATE HIGH (RTC 64,71)	
				MCSE	VERIFY VALIDITY SIGNALS (2)	CT0262
		20-413	MSTC	MREC	VERIFY NO CHANGE IN PCM RATE	
		20-414	MSTC	SCMP	PANEL 2	
					UP TLM CM SW - BLOCK	002S021
		20-415	MSTC	SCMP	PANEL 10 1. PAD COMM SW - OFF	
					2. EGRESS CM.	
-01 55		20-416	MSTC	SCDR	PANEL 8	
					EDS 1 CB - CLOSE 2 CB - CLOSE 3 CB - CLOSE	 008C049 008C050 008C051
					PANEL 7 EDS PWR SW - (ON-UP)	 007S001
					PANEL 2	
					EDS AUTO SW - (ON-UP)	002S067
				MSEQ	EDS VOTE 1 OUT LITE ON EDS VOTE 2 OUT LITE ON EDS VOTE 3 OUT LITE ON	CD0132 CD0133 CD0134
				MSTC	CVTS EDS POWER IS ON	
		20-417	MSTC	SCDR	STANDBY FOR ABORT REQUEST LIGHT CMD	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-417			CHECKS.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-418	MSTC	LOM	ABORT REQ A SW - ON	
			SCDR		ABORT LITE ON	
				MSEQ	ABT RQST A LITE ON ABT RQST B LITE ON	BS0080
			MSTC	LOM	ABORT REQUEST A SW - OFF	
			SCDR		ABORT LITE REMAINS ON	
				MSEQ	ABT RQST B LITE OFF	
			MSTC	HFLT	EXECUTE ABORT LIGHT (SYSTEM A) - OFF (RTC 00)	
			SCDR		ABORT LITE OUT	
				MSEQ	ABT RQST A LITE OFF	BS0080
		20-419	MSTC	LOM	ABORT REQ B SW - ON	
			SCDR		ABORT LITE ON	
				MSEQ	ABT RQST B LITE ON ABT RQST A LITE ON	BS0081
		20-420	MSTC	LOM	ABORT REQ B SW - OFF	
			SCDR		ABORT LITE REMAINS ON.	
				MSEQ	ABT RQST A LITE OFF	
		20-421	MSTC	GMIL	RESET REQUEST B RECEIVED LITE	
		20-422	MSTC	HFLT	EXECUTE ABORT LIGHT (SYSTEM B) - OFF RTC (06)	
			SCDR		ABORT LITE OUT	
				MSEQ	ABT RQST B LITE OFF	BS0081

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-423	MSTC	HFLT	EXECUTE ABORT LIGHT (SYSTEM A) - ON (RTC 01)	
			SCDR		PANEL 1	
					ABORT LITE ON	
			MSEQ		ABORT REQUEST A LITE ON	BS0080
		20-424	MSTC	HFLT	EXECUTE ABORT LIGHT (SYSTEM A) - OFF (RTC 00)	
			SCDR		ABORT LITE OUT	
				MSEQ	ABT RQST A LITE OFF	
		20-425	MSTC	HFLT	EXECUTE ABORT LIGHT (SYSTEM B) - ON (RTC 07)	
			SCDR		PANEL 1	
					ABORT LITE ON	
			MSEQ		ABORT REQUEST B LITE ON	BS0081
		20-426	MSTC	HFLT	ABORT LIGHT (SYSTEM B) - OFF (RTC 06)	
			SCDR		ABORT LITE OUT	
			MSEQ		ABORT REQUEST B LITE OFF	BS0081
-01	52	20-427	MSTC	LOM	AAS CHECKS COMPLETE	
		20-428	MSTC	SLMP	PANEL 3	
					UP TLM CMD SW - OFF	003S039
		20-429	MSTC	CVTS	AAS CHECKS COMPLETE. CMD DECODER IS OFF.	
-01	51	20-430	MSTC	MSEQ SCDR MACE MGNR MNQC	GO TO CH 223 FOR EDS TEST (K-0042). REPORT COMPLETION.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-431	MSTC	SCDR	PANEL 9	
					S-BAND SW - OFF	009S002
					INTERCOM SW - OFF	009S005
					VHF AM SW - OFF	
		20-432	MSTC	SLMP	PANEL 6	
					PAD COMM SW - OFF	
		20-433	MSTC	CSTO	PUT CH 223 ON UMBILICAL.	
					NOTE	
					SCDR ON CH 223 VIA UMBILICAL.	
		20-434	MSTC	CVTS	CSM PERSONNEL ON CH 223 FOR EDS TEST.	
					NOTE	
					FOLLOWING TIME FOR REFERENCE ONLY. CLOSE HATCH AS SOON AS POSSIBLE.	
		20-435	MSTC	SPAD	REMOVE PROTECTIVE COVER FROM HATCH COUNTER BALANCE BOTTLES.	------- NASA QC
-01 40		20-436	MSTC	SPAD	CLOSE CM HATCH.	
					NOTE	
					CM HATCH CLOSING PROCEEDS AS FOLLOWS..	
		20-437	SPAD		1. VERIFY/REMOVE 9EH2191 SEAL PROTECTOR	------- NASA QC
					2. VERIFY HATCH SEAL IS FREE OF FOREIGN PARTICLES	------- NASA QC

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-437			3. REMOVE V36-553292 SAFETY PIN	------- NASA QC
					4. SET GEAR BOX RACHET SELECTOR AND PUMP HANDLE RACHET SELECTOR TO NEUTRAL POSITION	------- NASA QC
					5. VERIFY BPC HATCH RELEASE SELECTOR ARROW POINTS AWAY FROM BPC JETT. APPLY POSITIVE PRESSURE TO BPC PLUNGER CENTER SHAFT ASSY AND VERIFY PLUNGER IN LOCKED CONDITION	------- NASA QC
					6. VERIFY THAT LATCHES ARE IN FULL OPEN POSITION	------- NASA QC
					7. RELEASE HATCH STOP LEVEL OF COUNTER BALANCE ARM ASSY.	------- NASA QC
					8. PUSH HATCH TO CLOSE POSITION.	------- NASA QC
					9. WITH TOOL B (V36-601400-11) INSTALLED INTO HATCH LATCHING MECHANISM TURN TOOL CLOCKWISE TO STOPS AND HOLD.	------- NASA QC
		20-438	SPAD	SLMP	PRESS/HOLD GEAR BOX SHEAR PIN RESET BUTTON.	
		20-439		SPAD	RELAX TORQUE AND ROTATE B TOOL CCW APPROX 14 DEG TO OBTAIN SHEAR PIN ENGAGEMENT.	

NOTE

MECHANISM MAY ROTATE CCW SLIGHTLY DUE TO SPRING PRESSURE.

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-440	SPAD	SLMP	1. RELEASE SHEAR PIN RESET BUTTON. 2. VERIFY SHEAR PIN INDICATOR IN THE WHITE AND SHEAR PIN NOT SHEARED. NOTE A. IF SHEAR PIN REVERIFICATION IS NECESSARY, ON MSTC/MTPE DIRECTION RERUN PREVIOUS FIVE STEPS. B. IF SHEAR PIN IS INADVERTENTLY SHEARED, OPEN HATCH AND REPLACE PIN PER TCP K-10004, SEQ. 18.0. 3. SET GEAR BOX RACHET SELECTOR AND PUMP HANDLE RACHET SELECTOR TO UNLATCH POSITION. 4. VERIFY GAGE PRESS OF COUNTER BALANCE IS INDICATING IN THE GREEN	
-01 35		20-441	SPAD	MSTC	CM HATCH CLOSED.	
		20-442	MSTC	SPAD	VERIFY PURGE LINE HOOK-UP COMPLETE.	------ NASA QC
		20-443	MSTC	MECS	PERFORM CABIN PURGE AND LEAK CHECK PER SEQ. 06 V2 ON CH 227. REPORT COMPLETION.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-444	MSTC	HFLT	REQUEST NEW AZIMUTH OR VERIFY OLD AZIMUTH IS CORRECT	
					NOTE IF NEW AZIMUTH DESIRED PERFORM THE FOLLOWING	
		20-445	HFLT		NEW AZIMUTH + -----	
		20-446	MSTC	SCMP	PANEL 2 INSERT V78E V21E + ----- (NEW AZIMUTH ENTER PRO	
					NOTE INDICATED PERSONNEL WILL PERFORM FOLLOWING READOUT TO VERIFY SWITCHES WERE NOT BUMPED DURING INGRESS. REPORT ANY ANOMALIES TO MSTC.	
		20-447	MSEQ		VERIFY..	
					LOGIC BUS SAFE LITE ON	CD0088
					PYRO BUS SAFE LITE ON	CD0218
					C AND W MASTER ALARM LITE OFF	CS0150
			MSCL		VERIFY.. ALL S/D LITES ON (16)	
					SCS CONT MODE LITE ON	CH3607
					ATT DB MIN LITE ON	CH3588
					RATE SW HIGH LITE ON	CH3590
					FDAI ERR 5 RTE 5 LITE OFF	CH3592
					FDAI 50/15 50/10 LITE OFF	CH3593
					GYRO 1 SMRD LITE ON	CH3623
					GYRO 2 SMRD LITE ON	CH3624
					ROLL BMAG RATE 2 LITE ON	CH3636
					PITCH BMAG RATE 2 LITE ON	CH3639
					YAW BMAG RATE 2 LITE ON	CH3642
					LIMIT CYCLE ON LITE OFF	CH3606
					PITCH ACCEL CMD LITE ON	CH3612

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		20-448	MGNL		VERIFY..		
					IMU CAGE LITE OFF	ZG8062	
					S/C CONTROL OF SATURN LITE OFF	ZG8015	
					FREE MODE LITE ON	ZG9032	
					BLOCK UPLINK LITE ON	ZG8041	
		20-449	MRCS		VERIFY..		
					SM A EPT AMBIENT (P14-17)	SR5065	
					SM B EPT AMBIENT (P14-18)	SR5066	
					SM C EPT AMBIENT (P14-19)	SR5067	
					SM D EPT AMBIENT (P14-20)	SR5068	
		20-450	MEPS		VERIFY..		
					ENTRY BAT A CURRENT 3 AMPS MAX (P1-12)	CC0222	
					ENTRY BAT B CURRENT 3 AMPS MAX (P1-12)	CC0223	
					ENTRY BAT C CURRENT 3 AMPS MAX (P1-12)	CC0224	
					BAT CHARGER AMP LOWER LIMITS (P1-24)	CC0215	
		20-451	MREC		VERIFY..		
					DSE MOTION LITE OFF	CT0012	
		20-452	MLFC		FC1 CONDENSER (P13-5) ----- DEG. F.	SC2081	
					FC2 CONDENSER (P13-5) ----- DEG. F.	SC2082	
					FC3 CONDENSER (P13-5) ----- DEG. F.	SC2083	
					FC1 STACK TEMP (P13-6) ----- DEG. F.	SC2084	
					FC2 STACK TEMP (P13-6) ----- DEG. F.	SC2085	
					FC3 STACK TEMP (P13-6) ----- DEG. F.	SC2086	
					FC1 H2 FLOW (P13-9) ----- LB/HR	SC2139	
					FC2 H2 FLOW (P13-9) ----- LB/HR	SC2140	
					FC3 H2 FLOW (P13-9) ----- LB/HR	SC2141	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION			REMARKS
		20-452			FC1 O2 FLOW (P13-10) -----	LB/HR	SC2142	
					FC2 O2 FLOW (P13-10) -----	LB/HR	SC2143	
					FC3 O2 FLOW (P13-10) -----	LB/HR	SC2144	
					FC1 CURRENT OUT (P13-11) -----	AMPS	SC2113	
					FC2 CURRENT OUT (P13-11) -----	AMPS	SC2114	
					FC3 CURRENT OUT (P13-11) -----	AMPS	SC2115	
		20-453	MECS		H2O WASTE Q -----	PCNT (P8-20)	CF0009	
					NO DECREASE IN H2O WASTE Q (P8-20) FROM VALUE RECORDED AT START OF CREW INGRESS.		CF0009	
		20-454	MECS	MSTC	ECS CABIN FUNTIONS COMPLETE.			
		20-455	MSTC	SCMP	PANEL 2 CABIN FAN 1 SW - OFF CABIN FAN 2 SW - OFF			------- NASA QC
		20-456	SPAD	SLMP	SET BPC HATCH RELEASE SELECTOR ARROW TO ''BPC JETT''.			
		20-457	MSTC	SPAD	1. CLOSE BPC HATCH PER T/S 8.2.11.4 2. REPORT WHEN COMPLETE.			------- NASA QC
		20-457A	CEDK MSTC		CLOSE BUS ISOL CONTACTORS			*2
		20-457B	MSTC MEPS		BUS A ISO CONTACTOR OPEN - OFF BUS B ISO CONTACTOR OPEN - OFF		KC7655 KC7656	*2
		20-457C	MSTC CEDK		BUS ISOL CONTACTORS ARE CLOSED			*2
	212	20-458	MSEQ MSTC		EDS TEST COMPLETE..			
		20-458A	MSTC MEPE		BUS A ISO CONTACTOR OPEN - ON BUS B ISO CONTACTOR OPEN - ON		KC7655 KC7656	*2
		20-459	MSTC	CSTO	PUT CH 214 ON UMBILICAL			
		20-460	MSTC	SCDR	PANEL 9			
					INTERCOM SW - T/R VHF AM SW - T/R S-BAND SW - T/R		009S005 009S004	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-461	MSTC	SLMP	PANEL 6	
					PAD COMM SW - T/R	
		20-462	MSTC	SCDR	PANEL 7	
					EDS POWER SW - OFF	007S001
			MSEQ		EDS VOTE 1 OUT LITE OFF	CD0132
					EDS VOTE 2 OUT LITE OFF	CD0133
					EDS VOTE 3 OUT LITE OFF	CD0134
		20-463	MSTC	SLMP	PANEL 3 BAT C _____ VDC	
		20-464	MSTC	SCMP	PANEL 2	
					UP TLM IU SW - ACCEPT	002S115
		20-465	MSTC	CVTS	1. EDS POWER IS OFF 2. CSM READY FOR Q-BALL SIM CMD 3. READINGS WILL BE SUPPLIED ON CH 148 4. CCS IS ENABLED	
		20-466	MSTC	MTPE SCDR MREC	STANDBY FOR Q-BALL CAL AT T-01 13	

NOTE

MTPE WILL MONITOR CH 121 AND
GIVE MARK TO SCDR AND MREC

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-467		SCDR	PANEL 1	
					LV ALPHA/SPS PC IND _____ PCNT	
				MREC	ANGLE OF ATTACK _____ PCNT (P11-8)	LS0200
					NOTE MTPE WILL GIVE READING TO VUMS ON CH 148	
-01 13		20-468	CLTC	MSTC	READY FOR CCS BLOCK	
		20-469	MSTC	SCMP	PANEL 2	
					UP TLM IU SW - BLOCK	002S115
		20-470	MSTC	SPAD	1. VERIFY BPC HATCH INSTALLATION COMPLETE.	------- NASA QC
					2. PROCEED WITH W/R SECURING.	
					3. REPORT WHEN COMPLETE.	------- NASA QC
					4. PAD CLEARING STARTS AT T-55 00.	
					5. PERFORM THE FOLLOWING..	
					A. EXTEND E/C HOOD JACKSCREWS (2 EA.) TO POINT OF CONTACT PLUS 5 TURNS.	------- NASA QC
					B. REMOVE HOOD SUPPORT KNOB AND STOW	------- NASA QC
					C. UNLATCH REMOVABLE HOOD SECTIONS, REMOVE AND STOW.	------- NASA QC

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-470			D. EXTEND LEFT SIDE HINGED HOOD SECTION AND LOCK IN EXTENDED POSITION.	------- NASA QC
					E. OPEN AND LATCH E/C AND TRUSS DOORS.	------- NASA QC
		20-471	MSTC	MSCS	STANDBY FOR BMAG 1 AND BMAG 2 POWER APPLICATION	
					NOTE MASTER ALARM MAY LITE DURING SWITCHING OF BMAG PWR SEL SW. IF SO RESET.	
		20-472	MSTC	SCDR	PANEL 2	
					C/W NORMAL SW - NORMAL VERIFY BMAG 1 AND BMAG 2 TEMP LITES - OFF.	
					PANEL 7	
					FDAI/GPI PWR SEL - OFF	007S003
					SCS ELEC PWR SEL - GDC/ECA	007S005
					BMAG 1 PWR SEL SW - ON	007S006
					BMAG 2 PWR SEL SW - ON	007S007
				MSCL	RECORD TIME IN TABLE 1.	
					GYRO 1 SMRD LITE OFF	CH3623
					GYRO 2 SMRD LITE OFF	CH3624
					NOTE WAIT 30 SEC	
		20-473	MSTC	SCDR	PANEL 7	
					FDAI/GPI PWR SEL - BOTH	007S003
		20-474	MSTC	SCMP	PANEL 2	
					C/W NORMAL SW - ACK	002S007

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-475	MSTC	MSCR	RECORD SCS NULLS	
					ROLL AT ERR DEG (P17-2) -----	CH3502
					PITCH AT ER DEG (P17-2) -----	CH3500
					YAW AT ERR DEG (P17-2) -----	CH3501
					ROLL RATE DG/S (P17-3) -----	CH3505
					PITCH RATE DG/S (P17-3) -----	CH3503
					YAW RATE DG/S (P17-3) -----	CH3504
					GDC ALIGN ---------	
		20-476	MSTC	SCDR	PANEL 1	
					FDAI SELECT SW - 1 SOURCE SW - ATT SET ATT SET ROLL TW - 162 DEG PITCH TW - 90 DEG YAW TW - 0 DEG GDC ALIGN PB - PUSH UNTIL FDAI 1 HAS STABILIZED	 001S004 001S005
					FDAI 1 ERRORS NULL	
					ATT SET ROLL TW - 168 DEG PITCH TW - 81 DEG YAW TW - 355 DEG	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-476		MSCR	ROLL AT ER DEG (P17-2) -----	CH3502 -4 MIN
					PITCH AT ER DEG (P17-2) -----	CH3500 -4 MIN
					YAW AT ER DEG (P17-2) -----	CH3501 -4 MIN
		20-477	SCDR		FDAI 1 ERRORS R = FULL SCALE RIGHT P = FULL SCALE UP Y = FULL SCALE RIGHT	
					FDAI SELECT SW - 2	001S004
				SCMP	VERIFY FDAI 2 ATT ERRORS SAME AS WERE ON FDAI 1.	
				MSCR	ROLL AT ER DEG (P17-2) -----	CH3502 -4 MIN
					PITCH AT ER DEG (P17-2) -----	CH3500 -4 MIN
					YAW AT ER DEG (P17-2) -----	CH3501 -4 MIN
		20-478	MSTC	SCDR	PANEL 1	
					GDC ALIGN PB - PUSH UNTIL FDAI 2 HAS STABILIZED	001S037
				SCMP	FDAI 2 ERRORS NULL	
		20-479	MSTC	SCDR	PANEL 1	
					ATT SET ROLL TW - 162 DEG PITCH TW - 90 DEG YAW TW - 0 DEG	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-479		SCMP	FDAI 2 - ERRORS	
					R = FULL SCALE LEFT P = FULL SCALE DOWN Y = FULL SCALE LEFT	
				MSCL	ROLL AT ER DEG (P17-2) -----	CH3502 +4 MIN
					PITCH AT ER DEG (P17-2) -----	CH3500 +4 MIN
					YAW AT ER DEG (P17-2) -----	CH3501 +4 MIN
		20-480	MSTC	SCDR	PANEL 1	
					FDAI SELECT SW - 1	001S004
					VERIFY FDAI 1 ATT ERRORS SAME AS WERE ON FDAI 2.	
				MSCR	ROLL AT ER DEG (P17-2) -----	CH3502 +4 MIN
					PITCH AT ER DEG (P17-2) -----	CH3500 +4 MIN
					YAW AT ER DEG (P17-2) -----	CH3501 +4 MIN
		20-481	SCDR		GDC ALIGN PB - PUSH UNTIL FDAI 1 HAS STABILIZED	001S037
					FDAI 1 - TOTAL ATTITUDE	
					R = 162 DEG P = 90 DEG Y = 0 DEG	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-481			GIMBAL DRIVE AND TRIM CHECK	
		20-482	MSTC	SCDR	PANEL 8	
					SPS	
					PITCH 1 BAT A CB - CLOSE	008C031
					YAW 1 BAT A CB - CLOSE	008C033
		20-483	MSTC	MEPS	VERIFY FC ON MN BUSES	
		20-484	MSTC	SLMP	PANEL 5	
					MN BUS TIE BAT A/C SW - (ON-UP)	005S004
					MN BUS TIE BAT B/C SW - (ON-UP)	005S005
			MEPS		ENTRY BATTS ON MN BUSES	
		20-485	MSTC	SCDR	PANEL 1	
					SCS TVC	
					PITCH SW - RATE CMD	001S038
					YAW SW - RATE CMD	01S039
		20-486	MSTC	SCDR	PANEL 7	
					TVC SERVO PWR	
					1 SW - AC1/MNA	007S008
					2 SW - AC2/MNB	007S009
					PANEL 1	
					LV/SPS IND SII/SIVB SW - GPI	001S053
					ROT CONTR PWR NORM 2 SW - AC	001S065
		20-487	MSTC	SCDR	RHC 2 - ARMED	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		20-488	MSTC	SCDR	PANEL 1	
					SPS GMBL MOT	
					PITCH 1 SW - START, REL	001S040
					YAW 1 SW - START, REL	001S042
					(MSCL RECORD TIME IN TABLE 1)	
					SPS GMBL PITCH TW - PLUS	
					VERIFY GPI + PITCH	
					SPS GMBL PITCH TW - MINUS	
					VERIFY GPI - PITCH	
					SPS GMBL YAW TW - PLUS	
					VERIFY GPI (+) YAW	
					SPS GMBL YAW TW - MINUS	
					VERIFY GPI (-) YAW	
					SPS GMBL PITCH TW - 0	
					SPS GMBL YAW TW - 0	
					RHC 2	
					PERFORM MTVC CONTROL CHECK.	
					VERIFY GIMBAL RESPONSE ON GPI.	
		20-489	MSTC	SCDR	PANEL 1	
					SCS TVC	
					PITCH SW - AUTO	001S038
					YAW SW - AUTO	001S039
					SPS GMBL MOT	
					PITCH 2 SW - START, REL	001S041
					YAW 2 SW - START, REL	001S043
					(MSCL RECORD TIME IN TABLE 1)	
					THC - CW	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-489			PANEL 1	
					SPS GMBL PITCH TW - PLUS	
					VERIFY GPI + PITCH	
					SPS GMBL PITCH TW - MINUS	
					VERIFY GPI - PITCH	
					SPS GMBL YAW TW - PLUS	
					VERIFY GPI + YAW	
					SPS GMBL YAW TW - MINUS	
					VERIFY GPI - YAW	
					SPS GMBL PITCH TW - 0 SPS GMBL YAW TW - 0	
					RHC 2 PERFORM MTVC CONTROL CHECK. VERIFY GIMBALS RESPOND ON GPI AND RETURN TO SET-IN VALUES WHEN RHC IS NEUTRAL.	
					PANEL 1	
					SPS GMBL MOT PITCH 2 SW - OFF YAW 2 SW - OFF (MSCL RECORD TIME IN TABLE 1)	 001S041 001S043
		20-490	MSTC	HFLT	REQUEST TW SETTINGS FOR SPS GIMBAL POSITIONS.	
					NOTE RECORD IN FOLLOWING SEQ.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		20-491	MSTC	SCDR	RHC 2 PERFORM MTVC CONTROL CHECK. VERIFY NO GIMBAL RESPONSE ON GPI.		
					THC - NEUTRAL		
					PANEL 1		
					SPS GMBL PITCH TW - ----- YAW TW - -----		TBD TBD
					SPS GMBL MOT PITCH 1 SW - OFF YAW 1 SW - OFF (MSCL RECORD TIME IN TABLE 1)	001S040 001S042	
					ROT CONTR PWR NORM 2 SW - AC/DC	001S065	
					RHC 2 - LOCKED		
		20-49<	MSTC	SLMP	PANEL 5		
					MN BUS TIE BAT A/C SW - OFF THEN AUTO BAT B/C SW - OFF THEN AUTO	005S004 005S005	
			MEPS		ENTRY BATTS OFF MN BUSES		
		20-493	MSTC	SCDR	PANEL 7		
					TVC SERVO PWR 1 SW - OFF 2 SW - OFF	007S008 007S009	
					PANEL 1		
					LV SPS IND S-II/S-IVB SW - S-II/S-IVB		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		20-494	MSTC	SCDR	PANEL 1		
					FDAI		
					SELECT SW - 1/2	001S004	
					SOURCE SW - CMC	001S005	
					FDAI 1 TOTAL ATTITUDE		
					R = LAUNCH AZ +90 DEG		*1
					P = 90 DEG		
					Y = 0 DEG		
					EMS RSI SETUP		

		20-495	MSTC	SCDR	PANEL 1		
					ENTRY EMS ROLL SW - (ON-UP)	001S050	
					GDC ALIGN PB - PUSH, HOLD	001S037	
					ATT SET YAW TW - ADJUST THRU 45 DEG. OBSERVE RSI TRACKS APPROX 45 DEG. ADJUST UNTIL EMS RSI POINTS UP		
					GDC ALIGN PB - REL	001S037	
					ENTRY EMS ROLL SW - OFF	001S050	
					ALIGN GDC TO IMU		

		20-496	MSTC	SCDR	PANEL 1		
					FDAI		
					SELECT SW - 1	001S004	
					SOURCE SW - ATT SET	001S005	
					ATT SET SW - IMU	001S006	
					ATT SET TW (3) - NULL FDAI 1 ERRORS		
		20-497	MSTC	SCDR	PANEL 1		
					ATT SET SW - GDC	001S006	
					GDC ALIGN PB - PUSH, HOLD	001S037	
					UNTIL GDC ALIGNED.		
					FDAI		
					SOURCE SW - CMC	001S005	
					SELECT SW - 1/2	001S004	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-497			EMS DV SET	
		20-498	MSTC	SCDR	PANEL 1 EMS MODE SW - STBY EMS FUNCTION SEL - DV SET/VHF RNG SET EMS RANGE/DV IND - 6999.9 FPS EMS FUNCTION SEL - DV	
					NOTE FOLLOWING TIMES IN MINS AND SECS.	
		20-499	MSTC	SPAD	1. RETURN ONE EEAP TO HOLDER IN W/R AND ONE RESUSCITATOR TO ML RESCUE LOCKER.*1 2. VERIFY W/R SECURING COMPLETE. ------- NASA QC 3. PERFORM FINAL INSPECTION. ------- NASA QC	
-55 00		20-500	MSTC	SPAD	CLEAR THE COMPLEX.	
		20-501	MSTC	SCMP	PANEL 2 C/W NORMAL SW - BOOST	002S007
		20-502	MSTC	CVTS	1. E/C HOOD READY FOR SA-9 RETRACT. 2. CSM PERSONNEL ARE CLEARING THE CONTROL AREA. 3. STANDING BY TO CYCLE SA-9 AND ARM S/C BUSES.	
-45 00		20-503	MSTC	CVTS	REQUEST GMIL SUPPORT ON CH 213.	
		20-504	MSTC	GMIL	RELEASE VHF ACS WHILE SLMP IS KEYING FOR RF TERMINAL COUNT.	
		20-505	MSTC	SLMP	DEPRESS CONTROL HEAD XMIT SW UNTIL ADVISED TO RELEASE.	
		20-506	MSTC	MCSE MOLC MCRF GMIL	PROCEED WITH RF READOUTS PER SEQ. 04 V2 USE CH 213 FOR COORDINATION.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-44 00		20-507	MSTC	CVTS	1. EDS POWER IS COMING ON.	
					2. CSM CMD DECODER IS COMING ON	
		20-508	CVTS	MSTC	STANDYBY FOR SA-9 RETRACT.	
		20-509	MSTC	SLMP	PANEL 3 UPTLM CMD SW - NORM	003S039
		20-510	MSTC	SCDR	PANEL 7	
					EDS PWR SW - (ON-UP)	007S001
			MSEQ		EDS VOTE 1 OUT LITE ON EDS VOTE 2 OUT LITE ON EDS VOTE 3 OUT LITE ON	CD0132 CD0133 CD0134
-43 00		20-511			SA-9 RETRACTED (L/V)	
					NOTE WAIT FOR SA-9 RETRACT.	
		20-512	MSTC	SLMP	HATCH GEAR BOX RATCHET SEL - LATCH	
		20-513	MSTC	MACE	VERIFY RF PCM OPERATION SATISFACTORY. LOAD PLUGS OUT PROGRAM. EXECUTE R112-1010. ENABLE BOTH DECOMS TO CONTROL ROOM.	
					NOTE MOMENTARY BLINKING OF APPLICABLE AIRBORNE PARAMETERS MAY BE SEEN ON CONTROL ROOM DIRECT DRIVEN DISPLAYS.	
		20-514	CVTS	MSTC	SA-9 AT PARK POSITION CLEAR TO ARM CSM BUSSES.	
		20-515	MSTC	SCDR	PANEL 1	
					CM RCS LOGIC SW - (ON-UP)	001S046
					NOTE VERIFY RCS CONTROL SAFE LITE ON 50 SECONDS AFTER ARMING RCS LOGIC AND PRIOR TO ARMING PYRO BUSSES.	*1

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		20-516	MSTC	SCDR	PANEL 8		
					SECS		
					ARM A CB - CLOSE	008C001	
					ARM B CB - CLOSE	008C002	
					LOGIC A CB - CLOSE	008C003	
					LOGIC B CB - CLOSE	008C004	
					LOGIC 1 SW - (ON-UP)	008S011	
					LOGIC 2 SW - (ON-UP)	008S015	
			MSLQ		LOGIC BUS SAFE LITE OFF	CD0088	
					LOGIC BUS ARMED LITE ON	CD0089	
					RCS ENABLE A AND B LITES OFF	CD0170	
						CD0171	
					ELS A AND B SAFE LITES (8) ON	CE0310	
						THRU	
						CE0317	
					MESC SYS A AND B SAFE LITES ON	CD0084	
						CD0085	
					RCS CONTROL SAFE LITE ON	CD0270	
					SMJC SAFE A AND B LITES ON	SD0352	
						SD0353	
					LOGIC BUS A VDC (P1-21)	CD0200	30 MIN
					LOGIC BUS B VDC (P1-21)	CD0201	30 MIN
		20-517	MSTC	SCDR	PANEL 8		
					SECS		
					PYRO ARM A SW - (ON-UP)	008S010	
					PYRO ARM B SW - (ON-UP)	008S014	
			MSLQ		PYRO BUS ARMED LITE ON	CD0219	
					PYRO BUS SAFE LITE OFF	CD0218	
					PYRO BUS B VDC (P1-22)	CD0006	36.8 MIN
					PYRO BUS A VDC (P1-22)	CD0005	36.8 MIN
		20-518	MSTC	CVTS	CSM BUSSES ARE ARMED		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-28 00		20-519	MSTC	SCMP	PANEL 2	
					H2 FANS 1 SW - OFF	
					2 SW - OFF	
					O2 FANS 1 SW - OFF	
					2 SW - OFF	
-25 00		20-520	MSTC	MRCS	VERIFY READY FOR PRESSURIZATION	
		20-521	MSTC	SCMP	PANEL 2	
					SM RCS	
					HE 1	
					A SW - (ON-UP), REL	002S024
					A TB - GRAY	
					B SW - (ON-UP), REL	002S025
					B TB - GRAY	
					C SW - (ON-UP), REL	002S026
					C TB - GRAY	
					D SW - (ON-UP), REL	002S027
					D TB - GRAY	
					HE 2	
					A SW - (ON-UP), REL	002S034
					A TB - GRAY	
					B SW - (ON-UP), REL	002S035
					B TB - GRAY	
					C SW - (ON-UP), REL	002S036
					C TB - GRAY	
					D SW - (ON-UP), REL	002S037
					D TB - GRAY	
					SEC PRPLNT FUEL PRESS	
					A SW - CLOSE, REL	002S116
					B SW - CLOSE, REL	002S117
					C SW - CLOSE, REL	002S118
					D SW - CLOSE, REL	002S119
		20-522	MSTC	MRCS	SM RCS HE AUX ISOL	
					A - ON	SR5097
					B - ON	SR5098
					C - ON	SR5099
					D - ON	SR5100

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-523	MSTC	MRCS	VERIFY GO FOR PROPELLANT ARMING	
					SM RCS PRPLNT A SW - (ON-UP), REL — 002S047 B SW - (ON-UP), REL — 002S048 C SW - (ON-UP), REL — 002S049 D SW - (ON-UP), REL — 002S050 PRIM PRPLNT A TB - GRAY B TB - GRAY C TB - GRAY D TB - GRAY SEC PRPLNT A TB - GRAY B TB - GRAY C TB - GRAY D TB - GRAY	
					NOTE FOLLOWING SM A, B, C, D READINGS FOR ENGINEERING INFO ONLY.	
		20-524	MSTC	SCMP	PANEL 2	
					RCS IND SEL - SM A — 002S028 SM RCS TEMP PKG IND _____ DEG. F. PRESS HE IND _____ PSIA SEC FUEL PRESS IND _____ PSIA PRPLNT QTY IND _____ PCNT SM RCS IND SW - HE TK TEMP HE TK TEMP _____ DEG. F.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-524			RCS IND SEL - SM B	002S028
					SM RCS	
					TEMP PKG IND _____ DEG. F.	
					PRESS HE IND _____ PSIA	
					SEC FUEL PRESS IND _____ PSIA	
					HE TK TEMP IND _____ DEG. F.	
					SM RCS IND SW - PRPLNT QTY	
					SM RCS PRPLNT QTY IND _____ PCNT	
					RCS IND SEL - SM C	002S028
					SM RCS	
					TEMP PKG IND _____ DEG. F.	
					PRESS HE IND _____ PSIA	
					SEC FUEL PRESS IND _____ PSIA	
					PRPLNT QTY IND _____ PCNT	
					SM RCS IND SW - HE TK TEMP	
					SM RCS HE TK TEMP IND _____ DEG. F.	
					RCS IND SEL - SM D	002S028
					SM RCS	
					TEMP PKG IND _____ DEG. F.	
					PRESS HE IND _____ PSIA	
					SEC FUEL	
					PRESS IND _____ PSIA	
					HE TK TEMP IND _____ DEG. F.	
					SM RCS IND SW - PRPLNT QTY	
					SM RCS PRPLNT QTY IND _____ PCNT	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-525	MSTC		PROVIDE SCDR WITH ALTIMETER ALIDADE SETTING. BARO _____ ALT _____	
		20-526	MSTC	MQLD	VERIFY SYNC OF S-BAND PM DATA. START MAG TAPE RCDR, ANALOG RCDR AND EVENT RCDR.	
-20 00		20-527	MSTC	HFLT	VERIFY OLD AZIMUTH OR REQUEST NEW AZIMUTH.	
					NOTE IF AZIMUTH UPDATE REQUIRED, PERFORM THE FOLLOWING..	
		20-528	HFLT		NEW AZIMUTH+ _____	
		20-529	MSTC	SCMP	PERFORM AZIMUTH CHANGE TO + _____ (NEW AZIMUTH)	
		20-530	MSTC	SCDR	ALIGN GDC TO IMU	
		20-531	MSTC	SCDR	PANEL 1 FDAI SOURCE SW - CMC 001S005 FDAI SELECT SW - 1/2 001S004	
					NOTE IF A HOLD SHOULD OCCUR AFTER THIS TIME, THE ABOVE PROCEDURE WILL BE USED TO UPDATE THE AZIMUTH.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-532	MSTC	SCDR	PANEL 8	
					AUTO RCS SELECT	
					A/C ROLL	
					A1 SW - OFF	008S017
					C1 SW - OFF	008S018
					A2 SW - OFF	008S019
					C2 SW - OFF	008S020
					B/D ROLL	
					B1 SW - MNA	008S021
					D1 SW - MNB	008S022
					B2 SW - MNA	008S023
					D2 SW - MNB	008S024
					PITCH	
					A3 SW - MNB	008S025
					C3 SW - MNA	008S026
					A4 SW - MNA	008S027
					C4 SW - MNB	008S028
					YAW	
					B3 SW - MNA	008S029
					D3 SW - MNB	008S030
					B4 SW - MNB	008S031
					D4 SW - MNA	008S032
					NOTE	
					AT T-12 00, LV RATE AND GUID LITES WILL FLASH	
		20-533	MSTC	MREC	STANDBY FOR CTE UPDATE	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-15 00		20-534	MSTC	HFLT	PERFORM CTE UPDATE	
			MREC		CTE UPDATE VERIFIED	
		20-535	MCSE	MSTC	RF TERMINAL COUNT COMPLETE.	
		20-536	MSTC	CVTS	SC GOING TO FULL INTERNAL POWER	
					NOTE ASSURE FC1 MN BUS A (R102) IS INSERTED PRIOR TO PERFORMING NEXT STEP.	
		20-537	MSTC	MEPE	SM MTR SW CLOSE - OFF	KC7300 R102 KC7636
			MEPS		SM MTR SW OPEN LITE ON	SC2410
					MAIN BUS A VDC (P1-1)	CC0206 29+/- 2 VDC
					MAIN BUS B VDC (P1-1)	CC0207 29+/- 2 VDC
					BAT BUS A VDC (P1-11)	CC0210 30 VDC MIN
					BAT BUS B VDC (P1-11)	CC0211 30 VDC MIN
					BAT BUS A AMPS (P1-12)	CC0222
					BAT BUS B AMPS (P1-12)	CC0223
					BAT C AMPS (P1-12)	CC0224
		20-538	MSTC	SLMP	PANEL 3	
					BAT C VOLTS	
					RETURN DC SEL - MNA	
		20-539	MSTC	MEPE	PS B TO BUS B - OFF	KC7034 R101
					PS B DC - OFF	KC7632 R101
					PS B AC START - OFF	KC7032 R101

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-540	MSTC	MEPE	PS 2, 3, 4, 7, 8 COMMIT LOCKOUT - ON	C076
				MEPE	22 0213 3441 IS INSERTED	
				MEPE	PS 2, 3, 4, 7, 8 LOCKOUT ON GC5137 LITE ON	
		20-541	MSTC	SCDR	PANEL 1	
					FDAI 1 TOTAL ATT R = LAUNCH AZ +90 DEG. P = 90 DEG Y = 0 DEG	
					BMAG MODE ROLL SW - RATE 1 001S020 PITCH SW - RATE 1 001S021 YAW SW - RATE 1 001S022	
					FDAI SCALE SW - 5-5 001S003	
				MSCL	ERROR 5 RATE 5 LITE ON	
		20-542	MSTC	SCDR	PANEL 1	
					RATE SW - HIGH 001S012	
				MSCL	RATE SW HIGH LITE ON CH3590	
		20-543	MSTC	SCDR	RHC 2 - ARMED	
		20-544	MSTC	SCMP	RHC 1 - ARMED	
		20-545	MSTC	SCDR	PANEL 1	
					ROT CONTR PWR DIRECT 1 SW - MNA/MNB 001S013 DIRECT 2 SW - MNA/MNB 001S067 CMC MODE SW - FREE 001S019 TRANS CONT PWR SW - ON-UP 001S066	
		20-546	MSTC	CVTS	SEND LOM TO CH 214 FOR COMM CHECKS.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-547	MSTC	CSTO	PUT ASTRO-LAUNCH CIRCUIT ON VHF	
		20-548	MSTC LOM CSTO		PERFORM COMM CHECK WITH SCDR VIA VHF ON ASTRO LAUNCH CIRCUIT.	
		20-549	MSTC	CSTO	1. PUT ASTRO-LAUNCH CIRCUIT ON UMBILICAL. 2. RELEASE VHF.	
		20-550	MSTC LOM CSTO		PERFORM COMM CHECK WITH SCDR VIA UMBILICAL ON ASTRO LAUNCH CIRCUIT.	
		20-551	MSTC	CSTO	PUT CH 214 ON UMBILICAL AND VHF.	
		20-552	MSTC	HFLT	PERFORM COMM CHECK WITH SLMP (S-BAND), SCMP (VHF), AND SCDR (SIMUL VHF/S-BAND) REPORT COMPLETION.	
		20-553	MSTC	SCDR	PANEL 1	
					SPS THRUST SW - NORMAL	001S023
					DV THRUST	
					A SW - OFF (GUARDED)	001S026
					B SW - OFF (GUARDED)	001S059
					LV/SPS IND	
					ALPHA SW - ALPHA	001S052
		20-554	MSTC	SCMP	PANEL 2	
					EDS AUTO SW - (ON-UP)	002S067
					ABORT SYS	
					LV RATE SW - AUTO	002S065
					2 ENG OUT SW - AUTO	002S064
					RCS CMD SW - OFF, REL	002S043

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-555		SCDR	PANEL 7	
					TVC SERVO PWR	
					1 SW - AC1/MNA	007S008
					2 SW - AC2/MNB	007S009
-10 00		20-556	MSTC	SLMP	PANEL 3	
					FC REACT SW - LATCH	
		20-557	MSTC	MHFC	052 EMERGENCY STOP - ON	(R038)
-08 30		20-558	MSTC	SLMP	PANEL 2	
					SEC COOL LOOP PUMP - OFF	
					(TIME _____)	
		20-559	MSTC	ALL	CONTROL ROOM RCDRS TO 5 MM/SEC MINIMUM.	
-08 00		20-560	MSTC	ALL	GIVE FINAL STATUS	
					MACE _____ MSPS _____ SCDR _____	
					MECS _____ MRCS _____ SCMP _____	
					MEPS _____ MREC _____ SLMP _____	
					MSEQ _____ MCSE _____ GMIL _____	
					MGNS _____ MMED _____ HFLT _____	
					MSCS _____ MLFC _____ MTPE _____	
					MBSE _____ CSAT _____	
		20-561	MSTC	KSTC	VERIFY GO FOR LAUNCH	
-06 00		20-562	MSTC	CSAT	S/C READY - ON	
		20-563	MSTC	CVTS	SC IS GO FOR LAUNCH. READY SW IS ON. SEND LOM TO ASTRO LAUNCH COMM CIRCUIT AT T-04 00.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		20-563			NOTE FOR REMAINDER OF COUNTDOWN, CONTROL ROOM READOUTS AND FUNCTIONS WILL BE PERFORMED BY THE CLOCK TIME AND PER THE PROCEDURE TO REDUCE TALK OVER OIS.	
-05 00		20-564			SA-9 TO FULL RETRACT (L/V)	
-04 10		20-565		SCDR	ALL LV ENG OUT LTS ON (5)	*1
		20-566	MSTC	CSTO	PUT ASTRO LAUNCH CIRCUIT ON VHF AND UMBILICAL	
		20-567		MSTC LOM CSTO	PERFORM ASTRO LAUNCH CIRCUIT COMM CHECK.	
-03 08		20-568			LAUNCH SEQUENCE START (L/V)	
-03 00		20-569	MSTC	SCMP	PANEL 2 DSKY VERIFY P02	
					CAUTION DO NOT ENTER THE FOLLOWING INSERT..	
		20-570	MSTC	SCMP	PANEL 2 DSKY INSERT V75	
		20-571	MSTC	SLMP	PANEL 3 TAPE RCDR FWD SW - FWD TAPE MOTION TB GRAY	003S051
				MREC	DSE MOTION LITE ON	CT0012

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
-02 15		20-572		MECE	ECS BYPASS - ON	KF7011 R025 KF7097 R021	
					ECS SOV NO. 2 - OFF	KF7090 R023	
					ECS SOV NO. 1 - OFF	KF7010 R027	
					ECS SWITCHOVER - ON	KF7096 R021	
					ECS SWITCHOVER - ON	KF7012 R025	
					TRIM NO. 1 ON/OFF - OFF	KF7009 R025	
					TRIM NO. 2 ON/OFF - OFF	KF7095 R021	*2
		20-573	MSTC	SCDR	PANEL 325.		
					PRIM GLY TO RAD VLV - (PULL,BYPASS)		
				MECS	PRIM PUMP GLY PRESS PSIG (P9-2) -----	CF0016	
					ACCUM PRIM QTY. PCNT (P9-3) -----	CF0019	
-01 15		20-574	MSTC	SLMP	PANEL 5		
					MN BUS TIE BAT A/C SW - (ON-UP)	005S004	
					BAT B/C SW - (ON-UP)	005S005	
				MEPS	ENTRY BATTS ON MN BUSES		
		20-575	MSTC	MEPE	PS A TO BUS A - OFF	KC7024 R100	
					PS A DC ON - OFF	KC7628 R100	
					PS A AC START - OFF	KC7022 R100	
-01 00		20-576	MSTC	SCDR	PANELS 9 AND 6		
				SLMP	PAD COMM SW - OFF VHF AM VOL T.W. - INCREASE TO ABOVE NORMAL LISTENING LEVEL.		
-00 45		20-577	MSTC	SCDR	PANEL 1		
					GDC ALIGN PB - PUSH, UNTIL ALIGNED	001S035	
					PANEL 2		
					FDAI 2 TOTAL ATTITUDE STABILIZED		
		20-578	MSTC	SCDR	PANEL 1		
					GDC ALIGN PB - RELEASE	001S035	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
-00 11		20-579	MSTC	CSTO	RELEASE UMBILICAL ONLY	
-00 08		20-580			S-IC IGNITION	
-00 01		20-581		SCDR	ALL LV ENG LTS OUT (5)	
-00 00		20-582			LIFTOFF	
		20-583	MSTC	MECS	REFR NO. 1 ON/OFF - OFF REFR NO. 2 ON/OFF - OFF	KF7006 R024 KF7092 R020 *2

NOTE

PERFORM FOLLOWING FUNCTIONS
AFTER UMBILICAL DISCONNECT.

20-584 (DELETED)

20-585 (DELETED)

NOTE

ACCOMPLISH GSE PWR DOWN PER
FOLLOWING SCRUB LIST

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		20-586	MSTC	MEPE	PS 2, 3, 4, 7, 8 COMMIT LOCKOUT (C076) - OFF	KC7703	
				MEPE	220 213 3440 IS INSERTED		
				MEPE	PS 2, 3, 4, 7, 8 LOCKOUT ON LITE OFF	GC5137	
		20-586A	KSTC	MSTC	PS8 MAY BE SECURED. ALL ACE LM CONTROL CMDS FOR PS8 HAVE BEEN REMOVED.		
		20-587	MSTC	MEPE	VERIFY PS 8 BAT EN LITE OFF		*2
					PS 8 DC ON (R075) - OFF	KC7687	
				MEPE	PS 8 OUTPUT LITE OFF	GC5116	
					PS 8 BAT ON LITE OFF	GC5117	
		20-588	MSTC	MEPE	PS 8 AC START (R075) - OFF	KC7686	
					PS 2 BAT ENABLE - OFF		R071
					PS 2 REMOTE SENSE (R088) - OFF	KC7737	
		20-589	MSTC	CSGS	ML ACE PS BATT ENABLE - OFF		
					VERIFY ACTIVATED LITE OFF		
					ML CSM ACE (BUS B) OFF SW - ON		
					ML LEM ACE (BUS A) OFF SW - ON		
					VERIFY ACTIVATED LITE OFF		
					ML ACE PS OUTPUT - OFF		
					VERIFY ACTIVATED LITE OFF		
					ML ACE PS INPUT - OFF		
					VERIFY ACTIVATED LITE OFF		
		20-590	MSTC	SPAD	RETURN 3 EA LIGHTWEIGHT HEADSETS TO CREW SYSTEMS BOND ROOM IN MSOB.		
		20-591	MSTC	ALL	1. SECURE STATIONS		
					2. REPORT TO MISSION MONITOR ROOM.		

NOTE

AFTER LAUNCH, DELETE ENTIRE RECYCLE/SCRUB PROCEDURES SEQUENCE OR ANY PART NOT USED FOR RECYCLE/SCRUB.

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		21-000			SCRUB/RECYCLE		
					NOTE		
					UTILIZE FOLLOWING RECYCLE PROCEDURES AT DISCRETION OF MSTC.		
					CAUTION		
					IN THE EVENT OF A HOLD, PERFORM THE FOLLOWING, IN THE ORDER SHOWN, FOR CONDITIONS INDICATED. (TIMES IN MINUTES AND SECONDS).		
					-------- HOLD INSIDE T-15 00 --------		
		21-001	MSTC	MEPE	PS2, 3, 4, 7, 8 COMMIT LOCKOUT - OFF		C076
				MEPE	22 0213 3440 IS INSERTED		
				MEPE	PS2, 3, 4, 7, 8 LOCKOUT ON LITE OFF	GC5137	
		21-002	MSTC	MEPE	PS B AC START - ON	KC7032	R101
					PS B DC - ON	KC7632	R101
					PS B TO BUS B - ON	KC7034	R101
					SM MTR SW P.S. VDC (P2-21)		39+/- 1
					SM MTR SW CLOSE - ON	KC7300 KC7636	R102
				MEPS	SM MTR SW OPEN LITE OFF	SC2410	
		21-002A	MSTC	MHFC	052 EMERG STOP-OFF		R038 *1
		21-003	MSTC	CSTO	PUT UMB ON CH 214 PUT VHF ON CH 214		
					--------HOLD INSIDE T-05-----		
		21-003A	MSTC	CVTS	VERIFY WHEN SA-9 BACK AT PARK POS.		*1

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		21-003			-------- HOLD INSIDE T-04 00 --------		
		21-004	MSTC	CSTO	PUT CH 214 ON UMBILICAL		
		21-005	MSTC	SCDR	PANEL 7		
					TVC SERVO PWR		
					1 SW - OFF	007S008	
					2 SW - OFF	007S009	
		21-006	MSTC	SCMP	PANEL 2 DSKY		
					V34		
					E		
		21-007	MSTC	SLMP	PANEL 3		
					FC REACS VLV SW - NORM	003S076	
					-------- HOLD INSIDE T-03 00 --------		
		21-008	MSTC	SLMP	PANEL 3		
					TAPE RCDR FWD SW - OFF	003S051	
					(TAPE MOTION TB B/P)		
					-------- HOLD INSIDE T-02 15 --------		
		21-009	MSTC	SCDR	PANEL 325		
					GLY TO RAD PRIM VLV - (PUSH, NORMAL)		
		21-010	MSTC	MECE	ECS SOV NO. 2 - ON	KF7090	R023
					ECS SOV NO. 1 - ON	KF7010	R027
					TRIM 1 ON/OFF - ON	KF7009	R025
					TRIM 2 ON/OFF - ON	KF7095	R021
					ECS SW/OVER - OFF	KF7096	R021
						KF7012	R025
					ECS BYPASS - OFF	KF7011	R025
						KF7097	R021
							*2
					-------- HOLD INSIDE T-01 00 --------		
		21-011	MSTC	SLMP	PANEL 5		
					MN BUS TIE		
					BAT A/C SW - OFF, THEN AUTO	005S004	
					BAT B/C SW - OFF, THEN AUTO	005S005	
				MEPS	ENTRY BATTS OFF MAIN BUSSES		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		21-012	MSTC	MEPE	PS A AC START - ON PS A DC ON - ON PS A TO BUS A - ON	KC7022 R100 KC7628 R100 KC7024 R100
		21-013	MSTC	SCDR	PANEL 9 PAD COMM SW - T/R	
		21-014	MSTC	SLMP	PANEL 6 PAD COMM SW - T/R	
		21-015	MSTC	CSTO	PUT UMB ON CH 214 PUT VHF ON CH 214	

NOTE

CSM IS NOW IN CONFIGURATION FOR A HOLD AT T-22 00 (NOMINAL L/V HOLD/RECYCLE POINT). WHEN COUNT RESUMES, CSM PICKS UP FUNCTIONALLY AT T-15 00.

NOTE

IN EVENT OF SCRUB, PERFORM REMAINDER OF THIS SEQ.

		21-016	MSTC	SCDR	PANEL 8 SECS PYRO ARM A SW - SAFE PYRO ARM B SW - SAFE LOGIC 1 SW - OFF LOGIC 2 SW - OFF	 008S010 008S014 008S011 008S015
		21-017	MSTC	MSEQ	VERIFY PYRO AND LOGIC BUSSES SAFE	
		21-018	MSTC	CVTS	1. RECONNECT SA-9. 2. VERIFY CLEARANCE TO EGRESS FLIGHT CREW.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		21-019	MSTC	SPAD	RETURN TO PAD WITH CLOSEOUT CREW. REPORT WHEN ON STATION. REMOVE ONE MINI-RESUSCITATOR FROM RESCUE LOCKER, 320 FT LEVEL AND PLACE IN W/R.	

NOTE

FOLLOWING PERSONNEL REQUIRED ON PAD FOR HATCH OPENING AND CREW EGRESS. PROTECTIVE CLOTHING REQUIRED FOR CLOSEOUT CREW (REF. SECT 1, PARA. 5.6)

SA-9	PAD APRON
SPAD	VAN DIRVER
BSCMP	VAN ESCORT
SUIT TECH	PVSI
SCMT	
SGQC	

NOTE

PROCEED WHEN SA-9 RECONNECTED.

		21-020	MSTC	SLMP	HATCH GEAR BOX RETACHET SEL-UNLATCH	
		21-021	MSTC	SCDR	PANEL 7	
					EDS PWR SW - OFF	007S001
			MSEQ		EDS VOTE 1 OUT LITE OFF	CD0132
					EDS VOTE 2 OUT LITE OFF	CD0133
					EDS VOTE 3 OUT LITE OFF	CD0134
		21-022	MSTC	SCMP	PANEL 2	
					C/W NORMAL SW - ACK	002S007

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		21-023	MSTC	CVTS	1. CSM BUSSES ARE SAFE	
					2. EDS POWER IS OFF	
					3. CLEAR TO SAFE USB CMD SYSTEM.	
		21-024	MSTC	MACE	R112-0000 RECONFIGURE DECOMMS FOR 204.8 AND 51.2 KB HARDLINE	
		21-025	MSTC	SCDR	PANEL 8	
					AUTO RCS SELECT	
					A/C ROLL A1 SW - OFF	008S017
					A/C ROLL C1 SW - OFF	008S018
					A/C ROLL A2 SW - OFF	008S019
					A/C ROLL C2 SW - OFF	008S020
					B/D ROLL B1 SW - OFF	008S021
					B/D ROLL D1 SW - OFF	008S022
					B/D ROLL B2 SW - OFF	008S023
					B/D ROLL D2 SW - OFF	008S024
					PITCH A3 SW - OFF	008S025
					PITCH C3 SW - OFF	008S026
					PITCH A4 SW - OFF	008S027
					PITCH C4 SW - OFF	008S028
					YAW B3 SW - OFF	008S029
					YAW D3 SW - OFF	008S030
					YAW B4 SW - OFF	008S031
					YAW D4 SW - OFF	008S032
		21-026	MSTC	SCDR	PANEL 1	
					EMS FUNCTION SEL - OFF	
					EMS MODE SW - STBY	
					CMC ATT SW - IMU	001S002
					FDAI	
					SCALE SW - ERR 5/RATE 5	001S003
					SELECT SW - 1	001S004
					SOURCE SW - GDC	001S005
					ATT SET SW - GDC	
					MAN ATT	
					ROLL SW - RATE CMD	001S007
					PITCH SW - RATE CMD	001S008
					YAW SW - RATE CMD	001S009

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		21-026			LIMIT CYCLE SW - OFF	001S010	
					ATT DEADBAND SW - MIN	001S011	
					RATE SW - LOW	001S012	
					TRANS CONTR PWR SW - OFF	001S066	
					ROT CONTR PWR		
					NORM 1 SW - OFF	001S064	
					NORM 2 SW - OFF	001S065	
					DIRECT 1 SW - OFF	001S013	
					DIRECT 2 SW - OFF	001S067	
					SC CONT SW - SCS	001S018	
					BMAG MODE		
					ROLL SW - RATE 2	001S020	
					PITCH SW - RATE 2	001S021	
					YAW SW - RATE 2	001S022	
					SPS THRUST SW - NORMAL	001S023	
					DV THRUST		
					A SW - OFF (GUARDED)	001S020	
					B SW - OFF (GUARDED)	001S059	
					SCS TVC		
					PITCH SW - AUTO	001S038	
					YAW SW - AUTO	001S039	
					SPS GMBL MOT		
					PITCH 1 SW - OFF	001S040	
					PITCH 2 SW - OFF	001S041	
					YAW 1 SW - OFF	001S042	
					YAW 2 SW - OFF	001S043	
					DV CG SW - CSM	001S054	
					ENTRY		
					EMS ROLL SW - OFF	001S050	
					.05 G SW - OFF	001S051	
					LV/SPS IND SII/SIVB SW - GPI	001S053	
					TVC GMBL DR		
					PITCH SW - 1	001S027	
					YAW SW - 1	001S028	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		21-027	MSTC	SCDR	PANEL 2	
					RCS CMD SW - OFF, REL	002S043
		21-028	MSTC	SCDR	PANEL 1	
					GDC ALIGN PB - PUSH, HOLD 15 SEC	
		21-029	MSTC	SCDR	PANEL 7	
					FDAI/GPI PWR SEL - OFF	007S003
					BMAG 1 PWR SEL - OFF	007S006
					BMAG 2 PWR SEL - OFF	007S007
			MSCR		RECORD TIME TABLE 1	
			MSCL		GYRO 1 SMRD LITE - ON	CH3623
					GYRO 2 SMRD LITE - ON	CH3624
		21-030	MSTC	SCDR	PANEL 7	
					SCS	
					TVC SERVO PWR	
					1 SW - OFF	007S008
					2 SW - OFF	007S009
					ELEC PWR SEL - OFF	007S005
					LOGIC PWR 2/3 SW - OFF	007S010
					SIG COND/DR BIAS PWR	
					1 SW - OFF	007S011
					2 SW - OFF	007S012
		21-031	MSTC	SCDR	PANEL 2	
					SM RCS PRPLNT	
					A SW - CLOSE, REL	002S047
					B SW - CLOSE, REL	002S048
					C SW - CLOSE, REL	002S049
					D SW - CLOSE, REL	002S050
					SM RCS PRIM AND SEC PRPLNT TB (8) - B/P	
		21-032	MSTC	MRCS	SM RCS SEC PRPLNT FUEL PRESS	
					A SW - OPEN, REL	002S116
					B SW - OPEN, REL	002S117
					C SW - OPEN, REL	002S118
					D SW - OPEN, REL	002S119

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		21-033	MRCS		SM RCS HE AUX ISOL	
					A - OFF	SR5097
					B - OFF	SR5098
					C - OFF	SR5099
					D - OFF	SR5100
		21-034	MSTC	SCDR	PANEL 8	
					SCS	
					TVC AC 1 CB - OPEN	008C055
					AC 1 CB - OPEN	008C009
					AC 2 CB - OPEN	008C010
					ECA/TVC AC2 CB - OPEN	008C054
					DIRECT ULL	
					MNA CB - OPEN	008C072
					MNB CB - OPEN	008C073
					CONTR/DIRECT	
					1 MNA CB - OPEN	008C013
					1 MNB CB - OPEN	008C014
					2 MNA CB - OPEN	008C070
					2 MNB CB - OPEN	008C071
					A/C ROLL	
					ROLL MNA CB - OPEN	008C015
					ROLL MNB CB - OPEN	008C016
					B/D ROLL	
					ROLL MNA CB - OPEN	008C017
					ROLL MNB CB - OPEN	008C018
					PITCH	
					MNA CB - OPEN	008C019
					MNB CB - OPEN	008C020
					YAW	
					MNA CB - OPEN	008C021
					MNB CB - OPEN	008C022
					ORDEAL	
					AC 2 CB - OPEN	008C065
					MNB CB - OPEN	008C064
					SCS	
					CONTR/AUTO	
					MNA CB - OPEN	008C074
					MNB CB - OPEN	008C075
					LOGIC BUS	
					1/2 MNA CB - OPEN	008C063
					3/4 MNA CB - OPEN	008C023
					1/4 MNB CB - OPEN	008C062
					2/3 MNB CB - OPEN	008C024

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		21-034			SYS	
					MNA CB - OPEN 008C011	
					MNB CB - OPEN 008C012	
					RCS	
					SM HTRS	
					A MN B CB - OPEN	
					C MN B CB - OPEN	
					B MN A CB - OPEN	
					D MN A CB - OPEN	
					PRPLNT ISOL	
					MNA CB - OPEN 008C041	
					MNB CB - OPEN 008C042	
					LOGIC	
					MNA CB - OPEN 008C043	
					MNB CB - OPEN 008C044	
					EMS	
					MNA CB - OPEN 008C052	
					MNB CB - OPEN 008C053	
					SPS	
					HE ISOL VLV	
					MNA CB - OPEN 008C029	
					MNB CB - OPEN 008C030	
					PITCH	
					1 BAT A CB - OPEN 008C031	
					2 BAT B CB - OPEN 008C032	
					YAW	
					1 BAT A CB - OPEN 008C033	
					2 BAT B CB - OPEN 008C034	
					PILOT VLV	
					MNA CB - OPEN 008C068	
					MNB CB - OPEN 008C069	
		21-035	SPAD	MSTC	1. CLOSEOUT CREW ON STATION 2. ONE RESUSCITATOR FROM ML RESCUE LOCKER AND ONE EEAP FROM HOLDER POSITIONED ON W/R HOOD TO RIGHT OF CM HATCH.	*1
		21-036	MSTC	SPAD	1. RE-INSTALL ENVIRONMENTAL CHAMBER PANELS. REPORT COMPLETION.	------- NASA QC
					2. VERIFY POVS AVAILABLE FOR FLIGHT CREW.	
		21-037	SPAD	MSTC	E/C PANELS INSTALLED.	
		21-038	MSTC	SLMP	BPC HATCH REL SEL - AWAY FROM BPC JETT.	
		21-039	MSTC	SPAD	OPEN BPC AND HATCH PER T/S 8.2.11.5.2 REPORT COMPLETION.	------- NASA QC

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		21-040	MSTC	SCDR SLMP	VERIFY/LOCK HAND CONTROLERS AND STOW (2 EA) ARM RESTS	
		21-041	SPAD	MSTC	CM HATCH IS OPEN.	
		21-042	MSTC	SCDR	PANEL 380 SUIT RET AIR VLV - PULL OPEN	
		21-043	MSTC	SCDR SCMP SLMP	REMOVE GLOVES AND THEN HELMETS AND PASS FROM CM	
		21-044	MSTC	SCDR	PANEL 7 DIRECT 02 VLV - CLOSE (CW)	
		21-045	MSTC	SCMP	PANEL 2 CABIN FAN 1 SW - OFF 002S029 2 SW - OFF 002S030 SUIT CKT H20 ACCUM AUTO SW - CENTER	
				MECE	TIME ----------	
		21-046	MSTC	SLMP	PANEL 4 SUIT COMPR 2 SW - OFF 004S007 1 SW - OFF 004S006	
				MECS	TIME ----------	
		21-047	MSTC	SCDR SCMP SLMP	DISCONNECT COU FROM PGA. OBTAIN SUIT CIRCUIT INTERCONNECT FROM SPAD AND CONNECT SUPPLY AND RETURN NOZZLES OF COU TOGETHER.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		21-048	MSTC	SLMP	PANEL 6	
					SUIT PWR SW - OFF	006S007
					PWR SW - OFF	006S006
		21-049	MSTC	SCDR	PANEL 9	
					SUIT PWR SW - OFF	009S007
					PWR SW - OFF	009S006
		21-050	MSTC	SCMP	PANEL 10	
					SUIT PWR SW - OFF	010S007
					PWR SW - OFF	010S006
		21-051	MSTC	GMIL	1. RELEASE VHF U/L CONSTANT KEY	
					2. RELEASE ACS VHF AND S-BAND CIRCUITS	
		21-052	MSTC	CSTO	RELEASE VHF, UMB AND S-BAND.	
		21-053	MSTC	SPAD	CONTINUE EGRESS	
		21-054	SPAD	SCDR SCMP SLMP	DISCONNECT CCU FROM PGA.	
		21-055	SPAD	SCMP	EGRESS FROM CM AND CONNECT POV TO PGA IF DESIRED	
					RECORD ---------- TIME	------ NR QC
		21-056	SPAD	SLMP	EGRESS FROM CM AND CONNECT POV TO PGA IF DESIRED	
					RECORD ---------- TIME	------ NR QC
		21-057	SPAD	SCDR	EGRESS FROM CM AND CONNECT POV TO PGA IF DESIRED.	
					RECORD ---------- TIME	------ NR QC
		21-058	SPAD	MSTC	CREW EGRESS COMPLETE	
		21-059	MSTC	SSSA	RETURN CREW TO MSOB.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		21-060	MSTC	CVTS	FLIGHT CREW EGRESS IS COMPLETE.	
		21-061	MSTC	SPAD	CLOSE SIDE HATCH AND BPC FOR L/V DETANKING PER T/S 8.2.11.5.1	
					REPORT COMPLETION. ------ NR QC ------- NASA QC	
		21-062	MSTC	SPAD	OPEN BPC AND SIDE HATCH PER T/S 8.2.11.5.2.	
					REPORT COMPLETION. ------ NR QC ------- NASA QC	
		21-063	MSTC	SPAD	CLEAR THE PAD WITH ALL PERSONNEL	
+06 30		21-064	CVTS	MSTC	CONTROL AREA IS OPEN FOR NORMAL WORK	
		21-065	MSTC	CVTS	CHANGE SMDPS TO 2 SW/1 VLV.	
					NOTE REMAINING REFERENCES TO SCDR, SCMP AND SLMP ARE FOR CSM TECHNICIANS.	
		21-066	MTPE	SCDR SCMP SLMP	INGRESS CM (SCMP TO LEB)	
		21-067	MTPE	SPAD	1. REINSTALL PYRO ARM SW GUARD ------- NASA QC	
					2. REINSTALL A34-377(4) C.B. GUARDS ON THE FOLLOWING.. ------- NASA QC	
					RCS PROP ISOL MN A CB - OPEN (GUARDED) 008C041 MN B CB - OPEN (GUARDED) 008C042 SCS DIRECT ULL MN A CB - OPEN (GUARDED) 008C072 MN B CB - OPEN (GUARDED) 008C073 SPS HE VLV MN A CB - OPEN (GUARDED) 008C029	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		21-067			MN B CB - OPEN (GUARDED)	008C030	
					PILOT VLV		
					MN A CB - OPEN (GUARDED)	008C068	
					MN B CB - OPEN (GUARDED)	008C069	
					3. RECONFIGURE PTC HEATER CABLE		
					4. RETURN EEAP TO HOLDER IN W/R AND RESUSCITATOR TO ML RESCUE LOCKER.		*1
					REPORT COMPLETION		------- NASA QC
+07 15		21-068	CVTS	MSTC	MSS OBSERVERS ARE TO REPORT TO PVTS AT +07 30 FOR BRIEFING.		
		21-069	MSTC	CVTS	VERIFY USB CMD SYSTEM IS ARMED		
		21-070	MSTC	HFLT	EXECUTE ACE G AND N UPLINK ENABLE (RTC 11, 15)		
			MCSE		VERIFY UDL VALIDITY SIGNALS (2)		
		21-071	MSTC	MQLD GMIL	TURN OFF ALL RECORDERS AND STANDBY FOR LOS.		
		21-072	MTPE	SCDR	PANEL 2		
					UP TLM CM SW - ACCEPT		
		21-073	MTPE	SLMP	PANEL 3		
					S BAND AUX		
					TV SW - OFF	003S037	
					TAPE SW - OFF	003S036	
					S BAND NORM		
					PWR AMPL HI SW - CTR	003S032	
					XPNDR SW - OFF	003S029	
					UP TLM CMD SW - OFF	000S039	
					POWER PMP SW - OFF	003S054	
					VHF AM		
					A SW - OFF	003S043	
					B SW - OFF	003S044	
					VHF BCN SW - OFF		
+08 00		21-074	MSTC	CVTS	CSM RF IS OFF. CSM CMD DECODER IS OFF. GMIL SUPPORT NO LONGER REQUIRED.		
		21-075	MTPE	MGNS	PROCEED WITH G+N DEACTIVATION.		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		21-076	MGNS	MGNR	K148 INSERT	
					ERR RESET ERR RESET V36 E V41N20 E +00000 E +00000 E +09000 E	
					* WAIT 15 SEC *	
				MGNL	NO ATT LITE ON ZG8094 GIMBAL LOCK LITE ON ZG8035	
					CDU ANGLES (P5-14)	
					X/OG DEG -----	0 +/- 3
					Y/1G DEG -----	0 +/- 3
					Z/MG DEG -----	+90 +/- 3
					NOTE VERIFY CDU ANGLES ARE WITHIN (1) DEG OF DESIRED. IF NOT, REPEAT PREV. SEQ.	
		21-077	MGNS	SCMP	PANEL 100	
					G+N POWER IMU - OFF 100S002	
				MGNL	TIME ----------	
					CAUTION IMU HEATER POWER MUST BE OFF LESS THAN 15 MIN. TO PREVENT POSSIBLE DAMAGE TO THE IMU.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		21-078	MGNS	SCMP	VERIFY PTC CABLE CONNECTED TO PSA 45J2	------- NASA QC
					CAUTION DO NOT PROCEED UNTIL PTC CABLE CONNECTED	
					NOTE IF PTC CABLE IS NOT CONNECTED, RECONFIGURE AS FOLLOWS..	
		21-079	MGNS	UFET	VERIFY PTC POWER OFF	
		21-080	MGNS	SCMP	REMOVE DUST COVER FROM PSA 45J2 CONNECT W001C TO PSA 45J2	
		21-081	MGNS	UFET	NOTIFY AFET PTC POWER IS COMING ON. PTC POWER SW - ON RESET ALARMS AS REQUIRED --- END OF PTC RECONFIGURATION ---	
		21-082	MGNS	SLMP	PANEL 5 G AND N IMU MNA - OPEN 005C056 MNB - OPEN 005C057 IMU HTR MNA - OPEN 005C058 MNB - OPEN 005C059	
			MGNL		TIME ----------	
		21-083	MGNS	UFET	VERIFY AN OPERATIONAL PTC	
		21-084	MGNS	MGNR	K148 V23N20 E 0 E	
			MGNL		GIMBAL LOCK LITE OFF	ZG8035

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		21-085	MGNS	MGNR	K148 INSERT (FRESH START) V21 N01 E 1036 E 40000 E	
			MGNL		NO ATT LITE OFF	
		21-086	MGNS	MTPE	CMC DEACTIVATION WILL CAUSE MASTER ALARM AND MAY CAUSE LOS.	
		21-087	MGNS	SCMP	PANEL 5 G AND N COMPUTER MNA CB - OPEN 005C060 MNB CB - OPEN 005C061	
			MGNL		TIME ----------	
					G AND N POWER SW - OFF 005S012 POWER AC1 CB - OPEN 005C054 AC2 CB - OPEN 005C055 OPTICS MNA - OPEN 005C062 MNB - OPEN 005C063	
		21-088	MGNS	MTPE	1. G&N POWER DOWN COMPLETED. 2. G&N OPERATE POWER IS OFF. MAIN BUS BACKUP BATTERY MAY BE RECONFIGURED.	*2
		21-088A	MTPE	MEPS	RECONFIGURE GND PS A&B BATT BACKUP UNITS FOR 20 CELL TAP.	*2
		21-088B	MEPS	LPDS	C14-621 UNITS 1 & 2 BATTERY COND PANEL CELL SEL SW - 20 CELLS VOLTMETER SEL SW - 24 DC POWER VOLTAGE_____VDC (25.0 - 28.0)	*2

+09 15	21-089	MSTC	CVTS	READY FOR RF SILENCE AND CONTROLLED SWITCHING.
	21-090	MTPE	MECS	SWITCH ECS GSE TO LOCAL CONTROL PER SEQUENCE 05 V2.
+10 00	21-091	CVTS	MSTC	RF SILENCE NO LONGER IN EFFECT

NOTE

DO NOT PROCEED BEYOND THIS SEQUENCE UNTIL RECYCLE PLAN HAS BEEN ESTABLISHED. REMAINDER OF POWER DOWN SEQUENCE IS PROVIDED TO BE

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*2

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		21-091			USED AS A GUIDE IN THE EVENT CRYO TOP-OFF OR SC AND GSE POWER DOWN IS REQUIRED. DO NOT PROCEED UNTIL RECYCLE PLAN IS ESTABLISHED.	
					NOTE 1. WAIT FOR MSS TO BE POSITIONED (APPROX. T+9 HRS, 30 MIN). 2. PROCEED WITH SERVICE STRUCTURE POWER UP WHEN CABLE INSTALLATION IS COMPLETE.	
		21-092	MTPE	SPAD	PROCEED WITH MSS RECABLE PER T/S 8.2.7.6. REPORT COMPLETION. ------ NR QC	
		21-093	MTPE SNQC SGQC	SPAD	PROCEED WITH POST CREW EGRESS INSPECT PER T/S 8.2.6.3. REPORT COMPLETION. ------ ------- NR QC NASA QC	
					MSS POWER UP ----------	
		21-094	MTPE CSGS SPDS	CSGS	MSS ACE PS INPUT - ON ACTIVATE LITE ON C14-626 (PS 1) AC INPUT ON LITE ON	
		21-095	MTPE CSGS SPDS	CSGS	MSS ACE PS OUTPUT ON ACTIVATE LITE ON C14-626 (PS 1) DC OUTPUT ON LITE ON	
		21-096	MTPE CSGS SPDS	CSGS	MSS CSM ACE BUS - ON MSS/LEM ACE BUS - ON ACTIVATE LITE ON C14-628 (PS 1) FEEDER BUS BCN LITE ON	
		21-097	MTPE SFET	SFET	C14-240 CONSOLE PWR CONTROL AC PWR SW - ON PWR ON LITE ON	
		21-098	MTPE	SFET	DC PWR +28 VDC SW - ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		21-098	SFET		+28 VDC PWR ON LITE ON VOLTAGE VDC ----------	28 +/- 1 VDC
		21-099	MTPE SFET	SFET	DC PWR +12V SW - ON +12V PWR ON LITE ON VOLTAGE VDC ----------	12 +/- 1 VDC
		21-100	MTPE SFET	SFET	DC PWR +6V SW - ON +6V PWR ON LITE ON VOLTAGE VDC ----------	6 +/- 1 VDC
		21-101	MTPE SFET	SFET	DC PWR -12V SW - ON -12V PWR ON LITE ON VOLTAGE VDC ---------- BLOWER IS OPERATING	-12+/- 1 VDC
					C14-628 VERIFY DC PWR LITE ON VERIFY AC PWR LITE ON	
					C14-590 VERIFY PNL PWR SW - ON VERIFY MAIN PWR SW - ON	
					C14-484 VERIFY AC LITE ON VERIFY AM-1 LITE ON	
					LDW410-11180 28 VDC SW - ON	
		21-102	MTPE	MACE	EXECUTE THE FOLLOWING INSERT D C B A R114 1 0 1 0	
			MACE		SYNC ACQUIRED	
			MEPE		PS 1 OUTPUT LITE ON GSE BUS PS 1 OUTPUT IS 29 +1 VDC (P2-23)	GC5138 GC5149
		21-103	MTPE	MEPS	P/S 5 AC START (R094) - ON	KC7709
			SPDS		C14-626 P/S 5 AC INPUT POWER ON LITE ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		21-104	MTPE	MEPS	P/S 5 DC ON (R094) - ON	KC7710
			SPDS		C14-626 P/S 5 DC OUTPUT POWER ON LITE ON	
			MEPE		P/S 5 OUTPUT ON LITE ON	GC5143
					GSE BUS P/S 5 IS 31 +/- 1 VDC (P2-23)	GC5150
					P/S 5 BAT EN LITE OFF	GC5145
					P/S 5 BAT ON LITE OFF	GC5144
		21-105	MTPE	MEPE	FEEDER BUS B (C076) - ON	KC7713
			MEPE		220 3234 321 IS INSERTED	
			MEPE		P/S 5 GSE BUS B ON LITE ON	GC5147
			SPDS		C14-628 P/S 5 FEEDER BUS B ON LITE ON	
		21-106	MTPE	MEPE	FEEDER BUS C (C076) - ON	KC7714
			MEPE		220 3234 331 IS INSERTED	
			MEPE		P/S 5 GSE BUS C ON LITE ON	GC5148
			SPDS		C14-628 P/S 5 FEEDER BUS C ON LITE ON	
		21-107	MTPE	MEPS	P/S 5 BATT ENABLE (R094) - ON	KC7711
			MEPE		P/S 5 BAT EN LITE ON	GC5145
			SPDS		C14-628 P/S 5 BATTERY ON LITE ON	

NOTE

IF CRYOGENIC TOP-OFF IS REQUIRED PERFORM FOLLOWING STEPS.

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		21-108	MTPE	SPAD PGSM	1. REMOVE FOLLOWING SC PANELS PER T/S 8.2.7.4.2 SM3 SM7 SM4 SM11 SM5 SM12 SM6 SM13 ------ ------- NR QC NASA QC	
					2. CONNECT GSE ACCESS CONNECTORS J17, J18, J19, J20 PER T/S 8.2.7.4.12 ------ ------- NR QC NASA QC	
					3. CONNECT SC CRYO LINES PER T/S 8.2.7.4.8 AND .9 ------ ------- NR QC NASA QC	
					4. A. CONNECT O2 STUB TOWER CRYO LINES PER TCP-K-10027 SEQ 2.22.2 THRU 2.22.4 SEQ 2.22.8 THRU 2.22.12 ------ ------- NR QC NASA QC	
					B. CONNECT H2 STUB TOWER CRYO LINES PER TCP-K-10027 SEQ 2.21.1 THRU 2.21.4 ------ ------- NR QC NASA QC	
					5. A. CONNECT GO2 TUBE TRAILER PER TCP-K-10027 SEQ 2.17	
					B. CONNECT GH2 TUBE TRAILER PER TCP-K-10027 SEQ 2.18	
					6. COORDINATE WITH MLFC FOR RE-INSTALLATION OF GH2, GO2, GN2, GHE K-BOTTLES FOR CRYO SERVICING.	
					7. REPORT COMPLETION	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		21-109	MSTC	CVTS	1. HAVE SUPPORT PERSONNEL PROVIDE GH2 TRAILERS (2) AND GO2 TRAILERS (2) FOR CONNECTION TO S14-026 AND S14-032 2. REPORT COMPLETION	
		21-110	SPAD	MTPE	CRYO SERVICING GSE INSTALLED AND CONNECTED.	
		21-111	MTPE	MLFC	PROCEED WITH CRYO RECYCLE OPERATIONS PER SEQ. 28V2. REPORT COMPLETION	
		21-112	MTPE	ALL	PERFORM TEST SETUPS PER SECT 8.1.2	
		21-113	MLFC	MTPE	1. FUEL CELLS ARE ON EXTERNAL GAS SUPPLY AND CRYOGENIC TANKS VENTED. 2. READY TO PROCEED WITH CRYO TOP-OFF.	
		21-114	MTPE	ALL	PROCEED WITH FUEL CELL OPERATIONS PER SEQ 23 AND 24 OF THIS TCP. NOTE IF TOTAL SCRUB IS CALLED, PROCEED WITH REMAINDER OF THIS SEQ.	
		21-115	MTPE	MLFC	PROCEED WITH FUEL CELL DEACTIVATION SEQ 34V2. USE CH224. WHEN SPAD REPORTS COMPLETION OF SET-UP.	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		21-115			NOTE PROCEED WITH REMAINDER OF SC SHUTDOWN AT DISCRETION OF MTPE AND MSTC. MEPE ADJUST DC LOADS AS REQUIRED TO SUPPORT FUEL CELL COOLDOWN. NOTE WAIT FOR COMPLETION OF FUEL CELL COOLDOWN AND REMOVAL OF GSE GAS BEFORE PROCEEDING.	
		21-116 MSTC		CVTS	VERIFY CLEARANCE TO VENT 02 SURGE TANK.	
		21-117 MTPE		SCDR	PANEL 326 SM 02 SUPPLY - OFF 02 REPRESS PKG VLV - FILL 02 SURGE TK VLV - ON	
				SCDR	PANEL 601 LIFT COVER ALTERNATELY OPEN AND CLOSE REPRESS 02 VLV TO BLEED EMER 02 SYS TO AMBIENT +50 PSI AS INDICATED ON EMER 02 GAGE (PANEL 602)	
		21-118 MTPE		SCMP	PANEL 4 ECS GLYCOL PUMP SEL - OFF TIME ----- .	
		21-119 MTPE		MEPS	PROCEED WITH SC POWER DOWN	
		21-120 MEPS		SCMP	PANEL 2 STATUS C/W LITES C/W PWR SW - OFF (CTR)	
		21-121 MEPS		SLMP	PANEL 5 C/W MNA CB - OPEN 005C052 MNB CB - OPEN 005C053	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		21-122	MEPS	ALL	STANDBY FOR MOMENTARY LOS.	
		21-123	MEPS	MACE	GO TO INTERNAL TIMING. DISABLE CM A/B DATA R112-1010.	
		21-124	MEPS	SLMP	PANEL 4	
					TELCOM	
					GRP 1 SW - OFF	004S004
					GRP 2 SW - OFF	004S005
					PANEL 5	
					INST	
					ESS MNA CB - OPEN	005C019
					ESS MNB CB - OPEN	005C020
			MSEQ		ELS SAFE LITES (8) OFF	CE0310 THRU CE0317
					PANEL 3	
					PWR SCE SW - OFF	003S052
					INV 2 AC BUS 2 SW - OFF	003S065
					INV 1 AC BUS 1 SW - OFF	003S060
					INV 2 SW - OFF	003S058
					INV 1 SW - OFF	003S057
				MEPE	HR MIN SEC	
		21-125	MEPS	SLMP	VERIFY AC BUS 1 AND 2 90 VAC MAX	
		21-126	MEPS	SCMP	PANEL 225	
					CTE	
					MNA CB - OPEN	225C021
					MNB CB - OPEN	225C022
		21-127	MEPS	UFET	C14-205	
					CB 6 - OPEN	
				UFET	CB 6 LITE OFF	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		21-128	MEPS	MEPE	SM MTR SW P.S. VDC (P2-21) -----	GC5030	39+/-1
		21-129	MEPS	MEPE	SM MOTOR SW CLOSE - OFF	KC7636	R102
				MEPE	MTR SW OPEN LITE ON	SC2410	
		21-130	MEPS	SLMP	PANEL 3		
					VERIFY MN BUS A AND MN BUS B 20 VDC MAX.		
		21-131	MEPS	MEPE	PS A TO BUS A - OFF	KC7024	R100
					PS B TO BUS B - OFF	KC7034	R101
				UFET	C14-205 CB 8 THRU 15 LITES OUT		
		21-132	MEPS	SCMP	PANEL 250		
					PYRO A SEQ A CB - OPEN	250C016	
					PYRO B SEQ B CB - OPEN	250C017	
					BAT A PWR ENTRY AND PL CB - OPEN	250C020	
					BAT B PWR ENTRY AND PL CB - OPEN	250C021	
					BAT C PWR ENTRY AND PL CB - OPEN	250C022	
					BAT C BAT CHGR AND EDS 2 CB - OPEN	250C023	
		21-133	MEPS	MSEQ	MESC INDICATE PWR - OFF	KD7021	R084
				MSEQ	MESC SYS A SAFE LITE OFF	CD0084	
					MESC SYS B SAFE LITE OFF	CD0085	
					LOGIC BUS SAFE LITE OFF	CD0088	
					PYRO BUS SAFE LITE OFF	CD0218	
					SMJC A SAFE LITE OFF	SD0352	
					SMJC B SAFE LITE OFF	SD0353	
		21-134	MEPS	SLMP	PANEL 3		
					VERIFY ALL DC INDICATOR POSITIONS INDICATE 20 VDC MAX.		
		21-135	MEPS	MTPE	SC POWER DOWN COMPLETE		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		21-136	MTPE	ALL	PROCEED WITH GSE POWER DOWN	
		21-137	MTPE	MECS	TRANSFER TO LOCAL AND POWER DOWN ECS GSE PER SEQ 5V2	
					PS 8 REMOTE TO LOCAL	
		21-138	MTPE	LPDS	PS 8 FEEDER BUS B - LOCAL	
			LPDS		BUS B FEEDER LITE REMAINS ON	
		21-139	MTPE	LPDS	PS 8 FEEDER BUS C - LOCAL	
			LPDS		BUS C FEEDER LITE REMAINS ON	
		21-140	MTPE	MEPE	PS 8 FEEDER BUS B (C076) - OFF	KC7690
			MEPE		220 212 4330 IS INSERTED	
		21-141	MTPE	MEPE	PS 8 FEEDER BUS C (C076) - OFF	KC7691
			MEPE		220 212 4340 IS INSERTED	
		21-142	MTPE	LPDS	C14-628 (PS 8) BATTERY BACK UP SW - ENABLE	
		21-143	MTPE	MEPE	PS 8 BAT ENABLE (R075) - OFF	KC7688
			LPDS		BAT ON LITE REMAINS ON	
			MEPE		PS 8 BAT EN LITE REMAINS ON	GC5118
		21-144	MTPE	MEPE	PS 8 DC ON (R075) - OFF	KC7687
			MEPE		PS 8 OUTPUT LITE OFF	GC5116
					PS 8 BAT ON LITE ON	GC5117
			LPDS		C14-626, P/S 8 DC OUTPUT POWER ON LITE OFF	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		21-145	MTPE	MEPE	PS 8 AC START (R075) - OFF	-C7686
			LPDS		C14-626, P/S 8 AC INPUT POWER ON LITE OFF	
		21-146	MTPE	LPDS	C14-628, CSM AND LEM GSE PWR SUP (PS 8) PWR SUPPLY INPUT ENABLE SW - LOCAL PWR SUPPLY OUTPUT ENABLE SW - LOCAL CONTROL SELECT SW - LOCAL	
		21-147	MTPE	LPDS	C14-626, P/S 8 AC INPUT POWER START SW - ON	
				LPDS	C14-626, P/S 8 AC INPUT POWER ON LITE ON	
		21-148	MTPE	LDPS	C14-626, P/C 8 DC OUTPUT POWER ON SW - ON	
			LPDS		C14-626, P/S 8 DC OUTPUT POWER ON LITE ON	
			MEPE		PS 8 OUTPUT ON LITE ON	GC5116
		21-149	MTPE	LDPS	BATTERY BACKUP RESET SW - ON	
			MEPE		PS 8 BAT ON LITE OFF	
					NOTE OMIT NEXT STEP AFTER LAUNCH	
		21-150	MTPE	CSGS	MOBILE LAUNCHER PWR 400 CPS SW - OFF	
			CSGS		ACTIVATE LITE REMAINS ON	
		21-151	MTPE	MEPS	POWER DOWN GSE DISTRIBUTION	
		21-152	MEPS	MECS	400 HZ BU PWR - OFF	KC7694 R016
		21-153	MEPS	MECS	400 HZ PRI PWR - OFF	KC7693 R016
			LPDS		A14-218 POWER ON LITE REMAINED ON	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		21-154	MEPS	UFET	C14-205 CB16 - OPEN CB17 - OPEN	
			UFET		CB16 AND 17 LITES OFF	
		21-155	MEPS	UFET	C34-655 PS BATTERY STANDBY SW - OFF DC OUTPUT PWR OFF SW - ON	
			UFET		DC OUTPUT PWR LITE OFF	
		21-156	MEPS	UFET	C34-655 AC INPUT STOP SW - ON	
			UFET		AC INPUT PWR ON LITE OFF	
			MEPE		MTR SW GND PS VOLTS 0+2-0 (P1-12)	GC5030
		21-157	MEPS	MEPE	BUS B FLT. OFF	KC7769 R075
			MEPS		GND PWR FILTER BANK B ON LITE - OFF	GC5076
		21-158	MEPE	MEPE	PS B DC ON - OFF	KC7702 R101
			MEPE		GSE BUS PS B IS 0+2-0 (P1-11) PS B OUTPUT ON LITE OFF	GC5128
			LPDS		C14-626 P/S 4 DC OUTPUT POWER LITE OFF	
		21-159	MEPS	MEPE	PS B AC START - OFF	KC7032 R101
			MEPE		GSE BUS PS B IS 0+2-0 (P1-3)	GC5028
			LPDS		C14-626 PS 4 AC INPUT POWER ON LITE OFF	
		21-160	MEPS	MEPE	BUS A FLT - OFF	KC7768 R075
			MEPS		GND PWR FLT BANK A ON LITE OFF	GC5075

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		21-161	MEPS	MEPE	PS A DC ON - OFF	KC7698 R100
			MEPE		GSE BUS PS A IS 0+2-0 (P1-11) PS A OUTPUT ON LITE OFF	GC5132 GC5124
			LPDS		C14-628 PS 3 DC OUTPUT POWER ON LITE OFF	
		21-162	MEPS	MEPE	PS A AC START - OFF	KC7022 R100
			MEPE		GND PS VOLTS BUS A IS 0+2-0 (P1-3) AC INPUT POWER ON LITE OFF	GC5024
		21-163	MEPS		PS 5 BATT ENABLE - OFF	KC7711 R094
			MEPS		PS 5 BAT EN LITE OFF	GC5145
			MEPE		PS 5 BAT EN LITE OFF	GC5145
			SPDS		C14-628 PS 5 BATTERY ON LITE OFF	
		21-164	MEPS	MEPE	FEEDER BUS C - OFF	KC7714 C076
			MEPE		220 3234 330 IS INSERTED	
			MEPE		PS 5 GSE BUS C ON LITE OFF	GC5148
			PSDS		C14-628 PS 5 FEEDER BUS C ON LITE OFF	
		21-165	MEPS	MEPE	FEEDER BUS B - OFF	KC7713 C076
			MEPE		220 3234 320 IS INSERTED	
			MEPE		PS 5 GSE BUS B ON LITE OFF	GC5147
			SPDS		C14-628 PS 5 FEEDER BUS B ON LITE OFF	
		21-166	MEPS		PS 5 DC ON - OFF	KC7710 R094
			MEPS		PS 5 OUTPUT ON LITE OFF GSE BUS PS 5 IS 0+2-0 (P2-23)	GC5143 GC5150
			MEPE		PS 5 OUTPUT ON LITE OFF	GC5143
			SPDS		C14-626 PS 5 DC OUTPUT POWER ON LITE OFF	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		21-167	MEPS		PS 5 AC START - OFF	KC7709 R094
			MEPS		PS 5 OUTPUT VDC INDICATES 0 +/- 1 (M)	GC5146
			SPDS		C14-626 PS 5 AC INPUT POWER ON LITE OFF	
		21-168	MEPS	CSGS	MSS ACE PS BATT ENALBE - OFF	
			CSGS		ACTIVATED LITE OFF	
			SPDS		C14-628 PS 1 BATTERY ON LITE OFF	
			MEPE		PS 1 BAT EN LITE OFF	GC5140
		21-169	MEPS	CSGS	MSS/CSM ACE BUS - OFF MSS/LEM ACE BUS - OFF	
			CSGS		ACTIVATED LITE OFF	
		21-170	MEPS	CSGS	MSS ACE PS OUTPUT - OFF	
			CSGS		ACTIVATED LITE OFF	
			SPDS		C14-626 (PS 1) DC OUTPUT POWER ON LITE OFF	
		21-171	MEPE	CSGS	MSS ACE PS INPUT OFF	
			CSAT		ACTIVATED LITE OFF	
			SPDS		C14-626 (PS 1) AC INPUT ON LITE OFF	
		21-172	MEPS	LPDS	C14-628 (PS 2) REMOTE LOCAL SENSING SW - REMOTE	
		21-173	MEPS		PS 2 REMOTE SENSE - OFF	KC7737 R088
		21-174	MEPS	MEPE	PS 2 BAT ENABLE - OFF	KC7682 R071

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		21-175	MEPS	CSGS	ML ACE PS BATT ENABLE - OFF	KC7682
			CSGS		ACTIVATED LITE OFF	
			LPDS		C14-628 PS 2 BATTERY ON LITE OFF	
		21-176	MEPS	CSGS	ML CSM ACE (BUS B) OFF SW - ON ML LEM ACE BUS A OFF SW - ON ACTIVATED LITE OFF	
		21-177	UFET		C14-205 CB1, 2, 18 AND 19 LITES OFF	
		21-178	MEPS	CSGS	ML ACE PS OUTPUT - OFF	
			CSGS		ACTIVATED LITE OFF	
			LPDS		C14-628 PS 2 DC OUTPUT POWER ON LITE OFF	
		21-179	MEPS	CSGS	ML ACE PS INPUT - OFF	
			CSGS		ACTIVATED LITE OFF	
			LPDS		C14-626 PS 2 AC INPUT POWER ON LITE OFF	
		21-180	MEPS	CSGS	UNITS 812 AND 813 GSE PWR SW - OFF	
		21-181	MEPS	LFET	C14-240 DC PWR -12 V SW - OFF DC PWR +6V SW - OFF DC PWR +12V SW - OFF DC PWR +28 V SW - OFF AC PWR SW - OFF	
			LFET		-12V DC PWR LITE OFF +6V DC PWR LITE OFF +12V DC PWR LITE OFF +28V DC PWR LITE OFF AC PWR LITE OFF	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		21-182	MEPS	SFET	C14-240 DC PWR -12V SW - OFF DC PWR +6V SW - OFF DC PWR +12V SW - OFF DC PWR +28V SW - OFF AC PWR SW - OFF	
				SFET	-12V DC PWR LITE OFF +6 DC PWR LITE OFF +12V DC PWR LITE OFF +28V DC PWR LITE OFF AC PWR LITE OFF	
		21-183	MEPS	LFET	C14-484 AM-1 SW - OFF AM-2 SW - OFF EM-1 SW - OFF AC SW - OFF	
		21-184	MEPS	UFET	C14-232 DC POWER SW - OFF C14-267 UNIT NO. 1 POWER CB - OFF C14-267 UNIT NO. 2 POWER CB - OFF	
		21-185	MEPS	SFET	C14-268 POWER C/B - OFF C14-484 AM-1 SW - OFF AC PWR SW - OFF	
		21-186	MEPS	LFET	C14-261 CB1 - OFF C14-346 AC POWER CB - OPEN DC POWER (C14-261) 28 VDC - OFF C14-261 LITE OFF (THRU WINDOW)	
		21-187	MEPS	LPDS	C14-481 AC POWER CB - OFF DC LOGIC A PWR CB - OPEN DC LOGIC B PWR CB - OPEN	
				LPDS	AC POWER ON LITE OFF DC LOGIC A AND B LITES OFF	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N	REMARKS
		21-188	MEPS	SFET	C14-590 PANEL PWR SW - OFF MAIN PWR CB1 - OFF	
				LPDS	A14-052 DC PWR SUPPLY PANEL AC INPUT SW - OFF POWER CONTROL PANEL 120/208 VAC CB'S - OFF 28 VDC CB - OFF A14-074 MAIN POWER 28 VDC SW - OFF MAIN POWER 115 VAC SW - OFF	
		21-189	MEPS	MTPE	GSE POWER IS DOWN.	
	212	21-190	MTPE	CSGS	TURN OFF POWER TO CRT'S AND TV MONITORS ON SC CONSOLES.	
		21-191	MTPE	CSGS	ASSISTANT STC CONSOLE SRE POWER LITES SW - OFF CONSOLE POWER LITE SW - OFF PDU POWER SW - OFF	
		21-192	MTPE	MQLD	STOP GSE FM/FM MAGNETIC TAPE RECORDING.	
		21-193	MTPE	UFET	C34-707-101 AC PWR SW - OFF	
	222	21-194	MTPE	MACE	SECURE FROM TEST	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		22-000			EPS OPTIONAL PROCEDURES		
		22-001			BATTERY CHARGING		
					CHARGE BATTERIES WHEN AND AS LONG AS NECESSARY (MEPS/MTPE DISCRETION) PER THE FOLLOWING STEPS.		
					ENTRY BAT A		
		22-002	MEPS	SCMP	PANEL 250 (VERIFY) BAT A TO PYRO BUS TIE CB - OPEN	250C018	
					BAT C TO BAT BUS A CB - OPEN	250C015	
		22-003	MEPS	SLMP	PANEL 5 MN BUS TIE BAT A/C SW - OFF	005S004	
		22-004	MEPS	SCDR	PANEL 7 (VERIFY) EDS PWR SW - OFF	007S001	
		22-005	MEPS	SLMP	PANEL 5 BAT RLY BUS BAT A CB - OPEN	005C012	
					PANEL 3 BAT BUS A VOLTAGE _____ VDC		
					BAT CHARGE SEL - A	003S028	
				MEPE	HRS _____ MIN _____ SEC _____		
			MEPS	SLMP	PANEL 3 BAT BUS A VOLTAGE _____ VDC		42-30
					BAT CHARGER _____ VDC		42-30
					BAT CHARGER CURRENT _____ AMPS		3.2 MAX
			MEPS		BAT A _____ VDC	CC0211	42-30
					BAT CHGR _____ AMPS	CC0215	3.2 MAX

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		22-005			NOTE WHEN BAT CHARGER CURRENT REACHES 0.4 AMPS OR AT MEPS MTPE DIRECTION, PROCEED AS FOLLOWS..	
		22-006	MEPS	SLMP	PANEL 3 BAT CHARGE SEL - OFF BAT BUS A VOLTAGE _____ VDC	003S028
				MEPE	HRS _____ MIN _____ SEC _____	
		22-007	MEPS	SLMP	PANEL 5 BAT RLY BUS BAT/A CB - CLOSE	005C012
					ENTRY BAT B ----------	
		22-008	MEPS	SCMP	PANEL 250 (VERIFY) BAT C TO BAT BUS B CB - OPEN BAT B TO PYRO BUS TIE CB - OPEN	250C024 250C019
		22-009	MEPS	SLMP	PANEL 5 (VERIFY) MN BUS TIE BAT B/C SW - OFF	005S005
		22-010	MEPS	SCDR	PANEL 7 (VERIFY) EDS PWR SW - OFF	007S001
		22-011	MEPS	SLMP	PANEL 5 BAT RLY BUS BAT B CB - OPEN	005C013
		22-012	MEPS	SLMP	PANEL 3 BAT BUS B VOLTAGE _____ VDC BAT CHARGE SEL - B	003S028
				MEPE	HRS _____ MIN _____ SEC _____	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	D E S C R I P T I O N		REMARKS
		22-013	MEPS	SLMP	PANEL 3		
					BAT BUS B VOLTAGE _____ VDC		42-30
					BAT CHARGER _____ VDC		42-30
					BAT CHARGER CURRENT _____ AMPS		3.2 MAX
			MEPS		BAT BUS B _____ VDC	CC0211	42-30
					BAT CHGR _____ AMPS	CC0215	3.2 MAX
					NOTE WHEN BAT CHARGER CURRENT REACHES 0.4 AMPS OR AT MEPS/ MTPE DIRECTION, PROCEED AS FOLLOWS..		
		22-014	MEPS	SLMP	PANEL 3		
					BAT CHARGE SEL - OFF	003S028	
					BAT BUS B VOLTAGE _____ VDC		
				MEPE	HRS _____ MIN _____ SEC _____		
		22-015	MEPS	SLMP	PANEL 5		
					BAT RLY BUS BAT B CB - CLOSED	005C013	
					ENTRY BAT C		
		22-016	MEPS	SCMP	PANEL 250 (VERIFY)		
					BAT C TO BAT BUS B CB - OPEN	250C014	
					BAT C TO BAT BUS A CB - OPEN	250C015	
		22-017	MEPS	SCDR	PANEL 7 (VERIFY)		
					EDS PWR SW - OFF	007S001	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		22-018	MEPS	SLMP	PANEL 5 (VERIFY) MN BUS TIE BAT A/C SW - OFF BAT B/C SW - OFF	 005S004 005S005	
		22-019	MEPS	SLMP	PANEL 3 BAT BUS C VOLTAGE _____ VDC BAT CHARGE SEL - C	 003S028	
				MEPE	HRS _____ MIN _____ SEC _____		
			MEPS	SLMP	PANEL 3 BAT BUS C VOLTAGE _____ VDC BAT CHARGER _____ VDC BAT CHARGER CURRENT _____ AMPS	 	42-30 42-30 3.2 MAX
			MEPS		BAT CHGR _____ AMPS	CC0215	3.2 MAX
					NOTE WHEN BAT CHARGER CURRENT REACHES 0.4 AMPS OR AT MEPS/ MTPE DIRECTION, PROCEED AS FOLLOWS..		
		22-020	MEPS	SLMP	PANEL 3 BAT BUS C VOLTAGE _____ VDC BAT CHARGE SEL - OFF	 003S028	
				MEPE	HRS _____ MIN _____ SEC _____		
		22-021	MEPS	MSTC	BATTERY CHARGING COMPLETE.		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		22-021			CONNECTION OF FUEL CELLS TO S/C BUSES	
		22-022	MEPS	SCMP	PANEL 2 CW NORMAL SW - NORMAL	
		22-023	MEPS	MEPE	PS A BAT ENABLE - OFF	KC7030 R075
			LPDS		BAT ENABLE ON LITE OFF	
		22-024	MEPS	MEPE	PS B BAT ENABLE - OFF	KC7635 R075
			LPDS		BAT ENABLE ON LITE OFF	
		22-025	MEPS	MEPE	ADJUST MN BUSES TO 29.0 VDC	
					MN BUS A VDC (P1-2) -----	CC0206 29+/-2
					MN BUS B VDC (P1-2) -----	CC0207 29+/-2
		22-026			(DELETED)	*2
		22-027	MEPS	SLMP	PANEL 3 FC 1 MN BUS B SW - OFF FC 3 MN BUS A SW - OFF	
		22-028	MEPS	SLMP	PANEL 3 FC1 MN BUS A SW - (ON - UP) , REL FC3 MN BUS B SW - (ON - UP) , REL FC2 MN BUS A SW - (ON - UP), REL	
			SLMP		PANEL 3 FC 1 BUS A TB - GRAY FC 2 BUS A TB - GRAY FC 3 BUS B TB - GRAY	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		22-029	MEPS	MEPE	ON C START C076 APPLY LOADS TO MN BUS A AND B SO THAT BUS B VOLTAGE AS MEASURED ON THE CRT IS LOWER THAN THE VOLTAGE MEASURED AT BUS A (1 VOLT MAX)	
					21 0000 01XX (BUS A LOAD)	C076
					21 0000 02XX (BUS B LOAD)	C076
					NOTE PS A AND B WILL BE USED AS A FINE ADJUSTMENT TO BRING BUSES WITHIN REQ. VOLTAGE TOLERANCE.	
		22-030	MEPS	SLMP	PANEL 3 FC 2 MN BUS B SW - (ON - UP), REL	
			SLMP		FC 2 BUS B TB GRAY	
			SCMP		PANEL 2 FC BUS DISC LITE OFF CW NORMAL SW - ACK	002S007
		22-031	EMPS	MEPE	ADJUST PS A TO 27.0 VDC	
			MEPE		30 0000 1270 IS INSERTED	C076
		22-032	MEPS	MEPE	ADJUST PS B TO 27.0 VDC	
			MEPE		30 0000 2270 IS INSERTED	C076
		22-033	MEPS	MEPE	INSERT BUT DO NOT EXECUTE THE FOLLOWING R-STARTS..	
					FC1 BUS A - ON	R102
					FC2 BUS A - ON	R103
					FC2 BUS B - ON	R103
					FC3 BUS B - ON	R103
		22-034	MEPS	MEPE	REMOVE MN BUS A AND B EXTERNAL LOADS.	
			MEPE		21 0000 0100 IS INSERTED 21 0000 0200 IS INSERTED	
		22-035			(DELETED)	*2

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS

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*2

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		22-035			DISCONNECTION OF FUEL CELLS FROM S/C BUSES.	
		22-036	MEPS	SCMP	PANEL 2 CW NORMAL SW - NORMAL	0025007
		22-037	MEPS	MEPE	ADJUST PS A OUTPUT TO 30.0 VDC	
			MEPE		GND PS A _____ VDC (P1-3)	GC5024 30+/-2
		22-038	MEPS	MEPE	ADJUST PS B OUTPUT TO 30.0 VDC	
			MEPE		GND PS B _____ VDC (P1-3)	GC5028 30+/-2
		22-039	MEPS	SLMP	PANEL 3 FC 2 MN BUS B SW - OFF	
			SLMP		PANEL 3 FC 2 BUS B TB BP	

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION		REMARKS
		22-040	MEPS	MEPE	ADJUST PS A AND B TO MAINTAIN 30 +/- 0.5 VDC ON MN BUSES DURING PERFORMANCE ON THE NEXT 3 STEPS		
		22-041	MEPS	SLMP	PANEL 3 FC 2 MN BUS A SW - OFF FC 1 MN BUS A SW - OFF FC 3 MN BUS B SW - OFF		
			SLMP		PANEL 3 FC 1 BUS A TB BP FC 2 BUS B TB BP FC 3 BUS B TB BP		
		22-042	MEPS	MEPE	ADJUST MN BUSES TO 29.0 VDC		
					MN BUS A VDC (P1-2) ----- MN BUS B VDC (P1-2) -----	CC0206 CC0207	29+/-2 29+/-2
		22-043	MEPS	MEPE	REMOVE EXTERNAL LOADS FROM S/C BUSES AT THE A14-074		
			MEPE		210 0000 100 IS INSERTED 210 0000 200 IS INSERTED		C076 C076
		22-044	MEPS	SLMP	C/W NORMAL SW - ACK	002S007	
		22-045	MEPS	MEPE	ADJUST MN BUSSES TO 29.0 VDC MN BUS A VDC ----- MN BUS B VDC -----	CC0206 CC0207	29 +/- 2 29 +/- 2
		22-046	MEPS	MEPE	PS A BAT ENABLE - ON PS A BAT ENABLE LITE ON PS B BAT ENABLE - ON PS B BAT ENABLE LITE ON		
		22-047	MEPS	UFET	C14-205 CB 16 - OPEN CB 16 LITE OFF		
		22-048	MEPS	LPDS	A14-074 MAIN PWR 28 VDC SW - OFF DC PWR ON LITE OFF MAIN PWR 115 VAC SW - OFF AC PWR ON LITE OFF		

TIME	COMM CH	SEQ-NO	COMM STA	RESP STA	DESCRIPTION	REMARKS
		22-049	MEPS	MEPE	NORMALIZE BUT DO NOT EXECUTE THE FOLLOWING R-STARTS.. FC 1 BUS A - OFF FC 2 BUS A - OFF FC 2 BUS B - OFF FC 3 BUS B - OFF	

		GIMBAL MOTORS							
		SERVO		CRT P18-2		SERVO/CLUTCH		CRT P18-4	
DATE	SEQ NO.	P1	P2	Y1	Y2	P1	P2	Y1	Y2
TOTAL TIME									

TABLE 1. GIMBAL MOTOR RUN TIME

ILLUS #1003

		SCS							
		BMAG-1			BMAG-2			GDC	
DATE	SEQ NO.	WARM UP	SPIN	OFF	WARM UP	SPIN	OFF	ON	OFF
TOTAL TIME									

TABLE 1. SCS RUN TIME

ILLUS #1002

SECTION V

EMERGENCY PROCEDURES

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1.0 GENERAL

1.1 THE PROCEDURES IN THIS SECTION WILL BE USED TO DIRECT EMERGENCY ACTIONS UNIQUE TO TCP-K-0007.

1.2 TCP-K-0209V2, EMERGENCY PROCEDURES DOCUMENT, LAUNCH COMPLEX 39, WILL SUPPLEMENT SECTION V OF THIS PROCEDURE AND BE USED TO DIRECT EMERGENCY ACTIONS NOT LISTED HEREIN.

1.3 CVTS/MSTC, WITH THE CONCURRENCE OF KSC SYSTEM SAFETY, WILL DIRECT THE EMERGENCY ACTION/ EVACUATION. IN EMERGENCIES WHERE TIME IS CLEARLY OF THE ESSENCE, CVTS/MSTC WILL DIRECT THE ACTION WITHOUT DELAY AND COORDINATE WITH KSC SYSTEM SAFETY AT THE EARLIEST POSSIBLE TIME.

1.4 THE PAD LEADER (SPAD) WILL DESIGNATE ONE MAN AT THE FOLLOWING STATIONS OR WORK AREAS AS ''LEAD'' WHO WILL COORDINATE EMERGENCY ACTIONS IN HIS AREA OF RESPONSIBILITY.

1. MSS, LEVEL 4C
2. MSS, LEVEL 3
3. MSS, -22' LEVEL
4. PAD APRON

1.5 EMERGENCY PHONE NUMBERS

FIRE	-117
MEDICAL	-2222/2225
SECURITY	-2121

2.0 CRYOGENIC (LH2/LO2 LEAKS)

DEFINITION MAJOR

A. STEADY STREAM.

B. VERIFY HEAVY CONCENTRATION OF VAPORS/FROST IN ABNORMAL AREAS.

C. POTENTIAL EXISTS THAT LEAK CANNOT BE CONTROLLED.

D. IMMEDIATE PROBLEM OF PERSONNEL HAZARD.

E. CATASTROPHIC EFFECTS FELT TO BE IMMINENT.

DEFINITION MINOR

A. VISUAL DRIPPING.

B. SMALL CONCENTRATION VAPORS/FROST IN ABNORMAL AREAS.

C. POTENTIAL EXISTS FOR CONTROLLING THE LEAK.

D. NO IMMEDIATE PROBLEM OF PERSONNEL HAZARD.

E. NO IMMEDIATE CATASTROPHIC EFFECTS ARE FELT TO EXIST.

2.1 MAJOR OR MINOR CRYO (LH2/LO2) LEAK - SM/SLA -

INTERIOR

STATION/ DISCOVERER	1.	ALARM, BY VOICE, PERSONNEL IN IMMEDIATE AREA.
	2.	REPORT CALL SIGN, LOCATION OR MINOR LEAK, OR SENSOR LOCATION, DESCRIPTION TO LEAD/MSTC
MSTC LEAD	1.	TURN ON EMERGENCY VENTILATION SYSTEM
	2.	EVACUATE NON-ESSENTIAL PERSONNEL
MSTC CVTS	1.	WE HAVE A CRYOGENIC LEAK AT _____.
	2.	NON-ESSENTIAL PERSONNEL ARE EVACUATING WORK PLATFORM LEVELS.
	3.	REQUEST (FIRE, MEDICAL, SECURITY) SUPPORT AS REQUIRED.
	4.	DIRECT SAFING SV SYSTEMS AND FACILITY EVACUATION AS REQD.
MTPE/ KSTE/ KSTE MTPE	1.	THERE IS A CRYOGENIC (LH2/ LO2) LEAK AT _____.
	2.	INFORM YOUR LEAD OF SITUATION AND STANDBY TO EVACUATE PERSONNEL.

(IF MINOR)

PERFORM FOLLOWING AS APPLICABLE..

1. OBTAIN H2 CONCENTRATION USING SAFETY PORTABLE DETECTOR AT ALARMING SENSOR.

2. EVALUATE LEAK. ATTEMPT TO STOP LEAK (IF RECOMMENDED).

3. REPORT RECOMMENDATION TO CONTINUE/STOP FLOW.

MSTC MLFC

1. STOP FLOW (IF RECOMMENDED) PER PARAGRAPH 3.0.

2. DETANK LEAKING SYSTEM (IF RECOMMENDED) PER PARA 2.4 (LO2) AND/OR 2.5 (LH2)

(IF MAJOR)

STATION/ DISCOVERER

WHEN POSSIBLE, REPORT STATION CALL, LOCATION AND DESCRIPTION TO LEAD/MSTC.

MSTC/ LEAD KSTC

1. EVACUATE ALL PERSONNEL FROM MSS/ML

2. INITIATE SLA EXTINGUISH SYSTEM (20 PERCENT) WHEN SLA IS CLEAR OF PERSONNEL. TURN OFF EMERGENCY VENTILATION SYSTEM (IF TURNED ON EARLIER)

ALL

1. EVACUATE VIA THE MOST EXPEDITIOUS EMERGENCY EGRESS (DO NOT ACTIVATE COOKIE CUTTER HATCHES)

2. BE ALERT TO PA SYSTEM ANNOUNCEMENTS.

LEAD

1. CONTINUE STATUS REPORTS UNTIL AREA IS SECURED (IF POSSIBLE).

2. NOTIFY NR/GAEC SAFETY, IF NOT PRESENT.

3. REPORT COUNT AND INITIATE SEARCH AND RESCUE (IF REQD)

4. RENDER EMERGENCY FIRST AID (IF REQUIRED)

MSTC/ KSTC — SHUTDOWN FLOWS (VENT DOWN, ETC.) AND POWERDOWN S/C AND GSE PER APPLICABLE PORTIONS OF SECTION V OF TCP'S IN PROGRESS. INCLUDE THE FOLLOWING, IF APPLICABLE..

MSTC MLFC
1. STOP CRYO FLOW PER PARAGRAPH 3.0.
2. DETANK LEAKING SYSTEM PER PARA 2.4 (LO2) AND/OR 2.5 (LH2) (IF RECOMMENDED).

MSTC MEPS
1. S/C ELECTRICAL POWERDOWN PER PARAGRAPH 4.0 OR 5.0 (IF REQUIRED)
2. GSE ELECTRICAL POWERDOWN PER PARAGRAPH 6.0 (IF REQUIRED).

MSTC CVTS — WHEN S/C AND IU LEVELS ARE CLEAR, INITIATE LOW MODE SM GN2 DELUGE PURGE AND SHUT OFF IU ECS AIR TO SUSTAIN INERTION WHEN FREON DEPLETES.

NOTE

-22 FT LEVEL FIREX AND EGRESS COOLANT FIREX MUST BE OFF TO GIVE REQUIRED FLOW TO IU WATER DELUGE, MSS, ML AND LES COOLANT FIREX SYSTEMS.

CVTS — ACTIVATE MSS AND LES COOLANT FIREX SYSTEMS (AS REQUIRED)

2.2 CRYO (LH2/LO2) LEAK - SM/SLA EXTERIOR

STATION/ DISCOVERER

1. ALARM BY VOICE, PERSONNEL IN IMMEDIATE AREA.
2. REPORT CALL SIGN, LOCATION OF LEAK OR SENSOR LOCATION AND DESCRIPTION TO LOAD/ MSTC.

MSTC LEAD

1. TURN ON EMERGENCY VENTILATION SYSTEM.
2. EVACUATE NON-ESSENTIAL PERSONNEL

MSTC CVTS

1. WE HAVE A CRYOGENIC LEAK AT _____.
2. NON-ESSENTIAL PERSONNEL ARE EVACUATING WORK PLATFORM LEVELS.
3. REQUEST (FIRE, MEDICAL, SECURITY) SUPPORT AS REQUIRED.
4. DIRECT SAFING LV SYSTEMS AND FACILITY EVACUATION AS REQD.

MTPE KSTE

1. THERE IS A CRYOGENIC (LO2/ LH2) LEAK AT _____.
2. INFORM YOUR LEAD OF SITUATION. EVACUATE ALL NON-ESSENTIAL PERSONNEL.

(IF MINOR)

NOTE

PERFORM THE FOLLOWING AS APPLICABLE.

LEAD

1. OBTAIN H2 CONCENTRATION

USING PORTABLE DETECTOR AT ALARMING SENSOR (OPERATED BY SYSTEM SAFETY)

2. EVALUATE LEAK. ATTEMPT TO STOP LEAK

3. REPORT RECOMMENDATION TO CONTINUE/STOP FLOW

MSTC MLFC 1. STOP FLOW PER PARAGRAPH 3.0 (IF RECOMMENDED)

2. DETANK LEAKING SYSTEM PER PARA 2.4 (LO2) AND/OR 2.5 (LH2) (IF RECOMMENDED)

MSTC MEPS 1. POWERDOWN S/C PER PARA. 4.0 OF 5.0 (IF REQD)

2. POWERDOWN GSE PER PARA. 6.0 (IF REQD)

MSTC MLFC 1. CONTINUE FLOWING. (REQUIRES KSC SYSTEM SAFETY CONCURRENCE).

(IF MAJOR)

STATION/ DISCOVERER — REPORT STATION CALL, LOCATION, AND DESCRIPTION TO LEAD/MSTC (IF POSSIBLE).

LEAD 1. EVACUATE ALL PERSONNEL FROM MSS/ML.

2. ASSIST EVACUATION

3. CONTINUE STATUS REPORTS UNTIL AREA IS CLEAR (IF POSSIBLE).

ALL 1. EVACUATE VIA THE MOST EXPEDITIOUS EMERGENCY EGRESS EXITS. DO NOT ACTIVATE COOKIE CUTTER HATCHES.

2. BE ALERT TO PA ANNOUNCEMENTS.

LEAD		1. CONTINUE STATUS REPORTS UNTIL AREA IS SECURED (IF POSSIBLE). 2. NOTIFY NR AND SAFETY IF NOT PRESENT. 3. REPORT COUNT AND INITIATE SEARCH AND RESCUE (WHEN POSSIBLE). 4. RENDER EMERGENCY FIRST AID (IF REQUIRED)
KSTC		SHUTDOWN FLOWS (VENT DOWN ETC) AND POWERDOWN SPACECRAFT AND GSE PER APPLICABLE PORTIONS ON SECTION V OF TCP'S IN PROGRESS.
MSTC	MLFC	1. STOP CRYO FLOW PER PARA. 3.0 2. DETANK LEAKING SYSTEM PER PARA 2.4 (LO2) AND/OR 2.5 (LH2) (IF RECOMMENDED)
MSTC	MEPS	1. POWERDOWN S/C PER PARA. 4.0 OR 5.0 (IF REQD) 2. POWERDOWN GSE PER PARA. 6.0 (IF REQD)
MSTC	CVTS	WHEN S/C AND IU LEVELS ARE CLEAR INITIATE LOW MODE SM GN2 DELUGE PURGE AND SHUTOFF IU ECS AIR.

NOTE

-22 FT LEVEL FIREX AND EGRESS COOLANT FIREX MUST BE OFF TO GIVE REQUIRED FLOW TO IU WATER DELUGE, MSS, ML AND LES COOLANT FIREX SYSTEMS.

CVTS	ACTIVATE MSS, AND LES COOLANT FIREX SYSTEMS (AS REQUIRED)

2.3 LO2 DETANKING

				NR QC	NASA QC
228	MLFC	MACE	VERIFY/PERFORM 02 AUTO DETANK ADAP PROGRAM IF/C0102 HAS BEEN INSERTED INTO COMPUTER WITH INSER 7-+0000802 ON C124		
	MLFC	SOMD	VERIFY/REMOVE MAN OVERRIDE FROM PV10.		
	MHFC		VERIFY OFDS PV10 CLS LITE ON		FC5979
	MLFC	MHFC	02 AUTO DETANK - ON		
	MHFC		33 0010 2301 IS INSERTED		C052
	MLFC		MONITOR CRT (P11-24) DURING 02 DETANKING. A VENT I/P DISPLAY MAY APPEAR BRIEFLY FOLLOWED BY A BRIEF VENT COMPLETE. FOLLOWING THIS 02 AUTO DETANK PURGE I/P WILL APPEAR. A PROGRAM TIME DELAY OF 10 MINUTES IS ALLOWED FOR DETANKING AND INERT GAS PURGE		
			WHEN 02 TK1 AND 02 TK2 QUANTITY READINGS (P11-15) HAVE BEEN STABILIZED AT LOW VALUES FOR A MINIMUM OF 5 MINUTES DURING THE PURGE I/P CYCLE, MLFC MAY TERMINATE DETANKING PRIOR TO AUTOMATIC PROGRAM EXIT BY SENDING 02 AUTO DETANK DE-ACT ON C052 WITH INSERT 33 0010 2303		
	MLFC	MHFC	VERIFY THE FOLLOWING		
			OFDS LV5 OPN LITE ON		FC5408
			OFDS LV6 OPN LITE ON		FC5410
			OFDS LV7 OPN LITE ON		FC5412
			OFDS LV8 OPN LITE ON		FC5414
			032 SC TNKS VT LITE OFF		FC5164

NOTE

WHEN CRT (P11-24) READS 02 AUTO DETANK - PROGRAM COMPLETE PERFORM THE FOLLOWING

	MLFC	MHFC	VERIFY THE FOLLOWING..		
			OFDS LV5 CLS LITE ON	FC5409	
			OFDS LV6 CLS LITE ON	FC5411	
			OFDS LV7 CLS LITE ON	FC5413	
			OFDS LV8 CLS LITE ON	FC5415	
			NOTE		
			CONTINUE TO MONITOR O2 T1 AND T2 PRESSURES (P11-22) AND QUANTITIES (P11-20 PERIODICALLY IF PRESSURE BUILDUP IS NOTED PERFORM THE FOLLOWING AS REQD TO VENT DOWN PRESSURE	SF0037 SF0038 SF0032 SF0033	
	MLFC	MHFC	SC OV1 LV6 OP/CL - ON	KC7594	R040
			OFDS LV6 OPN LITE ON	FC5410	
	MLFC	MHFC	SC OV2 LV8 OP/CL - ON	FC7596	R040
	MHFC		OFDS LV8 OPN LITE ON	FC5414	
	MLFC	MEPE	O2 VENT PV5 - ON - NORMALIZE	KC7579	R068
	MHFC		O32 SC TNKS VT LITE ON	FC5164	
	MLFC	MHFC	SCOV1 LV6 OP/CL - OFF	KC7594	R040
	MHFC		OFDS LV6 CLS LITE ON	FC5411	
	MLFC	MHFC	SC OV2 LV8 OP/CL - OFF	KC7596	R040
	MHFC		OFDS LV8 CLS LITE ON	FC5415	
	MLFC	MPWR	STOP O2 CYRO MODES - ON NORMALIZE	KC7485	R070
	MHFC		O32 SC TNKS VT LITE OFF	FC5164	
	MLFC	SCO2	PANEL 226		
			CRYO QTY AMPL 1 CB - OPEN		C020
			CRYO QTY AMPL 2 CB - OPEN		C021
			TIME		
228	MLFC	MACE	REMOVE ADAP PROGRAM IF/0102 BY INSERTING		

7--0000802 ON C124.

222 MLFC MIPE LO2 DETANKING COMPLETE.

2.4 LH2 DETANKING

228 MLFC MACE VERIFY/PERFORM LH2 AUTO DETANK ADAP PROGRAM IF/00101 HAS BEEN INSERTED IN COMPUTER WITH INSERT 7-+0000801 ON C124

MLFC MTPE REQUEST APDS ON F/C CHANNEL

MLFC MHFC H2 AUTO DETANK - ON

MHFC 33 0010 1301 IS INSERTED C052

MLFC MONITOR CRT (P11-19) DURING H2 DETANK. A VENT I/P DISPLAY MAY APPEAR BRIEFLY FOLLOWED BY A BRIEF VENT COMPLETE. FOLLOWING THIS, H2 AUTO DETANK PURGE I/P WILL APPEAR. A PROGRAM TIME DELAY OF 10 MINUTES IS ALLOWED FOR DETANKING AND INERT GAS PURGE

WHEN H2 TK1 AND H2 TK2 QUANTITY READING (P11-15) HAVE BEEN STABILIZED AT LOW VALUES FOR A MINIMUM OF 5 MINUTES DURING THE PURGE I/P CYCLE, MLFC MAY TERMINATE DETANKING PRIOR TO AUTOMATIC PROGRAM EXIT BY SENDING H2 AUTO DETANK DE-ACT ON C052 WITH INSERT 33 0010 1303

MLFC MHFC VERIFY THE FOLLOWING..

HFDS LV5 OPN LITE ON	FC5378
HFDS LV6 OPN LITE ON	FC5380
HFDS LV7 OPN LITE ON	FC5382
HFDS LV8 OPN LITE ON	FC5384
026 SC TNKS VT LITE OFF	FC5163

NOTE

WHEN CRT (P11-19) READS H2 AUTO DETANK - PROGRAM COMPLETE. PERFORM THE FOLLOWING

MLFC MHFC VERIFY THE FOLLOWING..

HFDS LV5 CLS LITE ON	FC5379
HFDS LV6 CLS LITE ON	FC5381
HFDS LV7 CLS LITE ON	FC5383

			HFDS LV8 CLS LITE ON	FC5385	
			026 SC TNKS VT LITE OFF	FC5163	
			NOTE		
			CONTINUE TO MONITOR H2 T1 AND T2 PRESSURES (P11-17) AND QUANTITIES (P11-15) PERIODICALLY IF PRESSURE BUILD-UP IS NOTED PERFORM THE FOLLOWING AS REQD TO VENT DOWN PRESSURE	SF0039 SF0040 SF0030 SF0031	
	MLFC	MHFC	HV1 LV6 OP/CL - ON	KC7570	R041
	MHFC		HFDS LV6 OPN LITE ON	FC5380	
	MLFC	MHFC	SC HV2 LV8 OP/CL - ON	KC7572	R041
	MHFC		HFDS LV8 OPN LITE ON	FC5382	
	MLFC	MEPE	H2 VENT PV5 O2 TKS - ON NORMALIZE	KC7578	R072
	MHFC		026 SC TNKS VT LITE ON	FC5163	
	MLFC	MHFC	SC HV1 LV6 OP/LC - OFF	KV7570	R071
	MHFC		HFDS LV6 CLS LITE ON	FC5381	
	MLFC	MHFC	SC HV2 LV8 OP/CL - OFF	KC7572	R041
	MHFC		HFDS LV8 CLS LITE ON	FC5385	
	MLFC	MLPE	STOP H2 CYRO MODES - ON NORMALIZE	KC7472	R074
	MHFC		026 SC TNKS VT LITE OFF	FC5163	
228	MLFC	MACE	REMOVE LH2 AUTO DETANK ADAP PROGRAM IF/00101 BY INSERTING 7--0000801 ON C124		
222	MLFC	MTPE	LH2 DETANKING COMPLETE.		

3.0 EMERGENCY SHUTDOWN - CRYO FLOW

3.1 STOP H2 FLOW

MLFC	MHFC	SS H2 DISPOS LV34 - ON	KC7726	R051
MLFC		H2 LV5 CLOSED	KC7570	
		H2 LV7 CLOSED	KC7571	
		5 -05 -07 -00		C060
MLFC	MHFC	H2 CRYO MODE STOP - ON	KC7472	R074
		NORMALIZE		
	PLHM	S14-026		
		MV5 - OPEN		
MLFC	SHFD	FOR LH2 DEWAR		
		VALVE MV1356 - CLOSED		
		VALVE 107 - OPEN		
		VALVE 104 - CLOSED		
MLFC	MTPE	H2 FLOW STOPPED		

NOTE

MLFC MONITOR LH2 FILL LINE PRESS AND OPEN/CLOSE G36PV2 AS REQD TO PREVENT OVER PRESSURIZATION.

3.2 STOP O2 FLOW

MLFC		O2 LV5 CLOSED	KC7593	
		O2 LV7 CLOSED	KC7595	
		O2 PV10 OPEN	KC7586	
		3 -05 -07 +10 IS INSERTED		C060
MLFC		FOR TRANSFER UNIT		
		O2 CRYO MODE STOP - ON	KC7485	R070
		NORMALIZE		
MLFC	PLOM	S14-032		
		MV2 - OPEN		

MV3 - OPEN
MV5 - OPEN
MV6 - OPEN
MV7 - OPEN

MLFC MHFC — STOP 065 02 FLOW - ON — KC7337 R070
NORMALIZE

MLFC SOMD — FOR LO2 DEWAR
VALVE MV1429 - CLOSED
VALVE MV1437 - OPEN
VALVE MV1430 - OPEN
VALVE MV204 - CLOSED

MLFC MTPE — 02 FLOW HAS BEEN STOPPED

NOTE

MLFC MONITOR LO2 FILL PRESS AND OPEN/CLOSE G35PV10 AS REQUIRED TO PREVENT OVER PRESSURIZATION.

4.0 SC ELECTRICAL POWERDOWN (SC ON INTERNAL)

4.1 FUEL CELL REMOVAL FROM BUS

MSTC CSAT	SMFC 1 BUS A, B DISC SW - ON SMFC 2 BUS A, B DISC SW - ON SMFC 3 BUS A, B DISC SW - ON	*2

4.2 SECURING OF SC AND GSE PWR LESS ACE AND MTR SW CONTROL PWR FROM THE C14-205

MEPS MEPE	SM MTR SW CLOSE - OFF (IF REQUIRED)	KC7636 R102
MEPS SLMP	PANEL 3 MN BUS TIE A/C - OFF MN BUS TIE B/C - OFF	
MEPS MSEQ	MECS IND POWER - OFF	KC7021 R080
MEPS UFET	C14-205 CB6 - OPEN	
MEPS MACE	GO TO INTERNAL TIMING	R112 (1010)

THE FOLLOWING STEP WILL BE PERFORMED AT MTPE DISCRETION

MTPL SLMP	PANEL 250 ALL CB'S OPEN

5.0 SC ELECTRICAL POWERDOWN (SC ON EXTERNAL)

5.1 SECURING OF SC AND GSE PWR LESS ACE AND MTR SW CONTROL PWR FROM THE C14-205

MEPS MEPE	SM MTR SW CLOSE - OFF	KC7636 R102
MEPS SLMP	PANEL 3 MN BUS TIE A/C - OFF MN BUS TIE B/C - OFF	
MEPS MSEQ	MECS IND POWER - OFF	KC7021 R080
MEPS UFET	C14-205 CB6 - OPEN	
MEPS MACE	GO TO INTERNAL TIMING	R112 (1010)

THE FOLLOWING STEP WILL BE PERFORMED AT MTPE DISCRETION

MTPE SLMP	PANEL 250 ALL CB'S OPEN

6.0 GSE ELECTRICAL POWERDOWN

6.1 SECURING OF SC AND GSE PWR TO SC

MEPS CSGS GND PS EMERGENCY CUT OFF SW - ON

7.0 LAUNCH MISSION RULES IMPLEMENTATION

7.1 PARAMETERS DESCRIBED IN THE LAUNCH MISSION RULES MAY REQUIRE IMPLEMENTATION OF EMERGENCY PROCEDURES.

7.2 OUT OF TOLERANCE CONDITIONS AND TRENDS TOWARD OUT OF TOLERANCE CONDITIONS RECOGNIZED BY TEST TEAM PERSONNEL MUST BE REPORTED TO THE MSTC AS SUCH. FURTHER, - IF ANY OF THESE CONDITIONS CAN BE CATEGORIZED AS EMERGENCIES AS DEFINED IN SECT V THIS TCP, K-0209V2, EMERGENCY PROCEDURES DOCUMENT, THEN A PARALLEL REPORT, RECATEGORIZED AS AN EMERGENCY MUST BE REPORTED BY TEST PERSONNEL TO THE MSTC.

7.3 OUT OF TOLERANCE CONDITIONS AND TRENDS TOWARD OUT OF TOLERANCE CONDITIONS MAY COME FROM CLTC/CTSC/ CVTS/MSTC

7.4 CVTS MUST REACT IN REAL TIME TO SELECT THE PROPER PROCEDURE EXTRACTED IN TOTAL OR IN COMBINATION FROM APOLLO/SATURN 5 SPACE VEHICLE TEST SUPERVISOR EMERGENCY PROCEDURES, TCP NO. I-46001 OR APOLLO/SATURN V APOLLO FLIGHT CREW EMERGENCY EGRESS PROCEDURES, LAUNCH COMPLEX, 39, TCP NO. I-46002 (RED BOOK).

7.5 MSTC REACTION MAY BE EXTRACTED FROM EMERGENCY PROCEDURES, SECTION V, THIS TCP OR FROM TCP V-0209V2, EMERGENCY PROCEDURES DOCUMENT, LAUNCH COMPLEX 39.

8.0 EMERGENCY EGRESS IMPLEMENTATION

8.1 EMERGENCY EGRESS/RESCUE FROM THE S/C FOR THE PERIOD PRECEDING THE START OF LV CRYOGENIC LOADING IS THE RESPONSIBILITY OF THE NR CONTINGENCY CREW.

8.2 EMERGENCY EGRESS/RESCUE FROM THE SPACECRAFT FOR THE PERIOD OF CLOSEOUT OPERATIONS (FOLLOWING LV CRYOGENIC LOADING) IS THE RESPONSIBILITY OF THE CLOSEOUT CREW (HEADED BY NR).

8.3 EMERGENCY EGRESS/RESCUE FROM THE S/C IS THE RESPONSIBILITY OF THE PAD EGRESS TEAM (TWC) FOR THE PERIOD FROM S/C HATCH CLOSEOUT (AT WHICH TIME THE CLOSEOUT CREW EVACUATES) UNTIL RETURN OF THE CLOSEOUT CREW TO THE SPACECRAFT.

8.3.1 AFTER FLIGHT CREW INGRESS, THE BEST POSSIBLE ESTIMATE OF TIME REMAINING UNTIL CATASTROPHIC OCCURRENCE MUST BE MADE TO FACILITATE MANAGEMENT DECISIONS. REPORT..

A. 3 TO 5 MINUTES

B. 5 TO 15 MINUTES

C. LONGER THAN 15 MINUTES.

NOTE

CATASTROPHIC OCCURRENCE IS CONSIDERED THAT WHICH WOULD BE LETHAL TO FLIGHT CREW/CLOSEOUT CREW.

NOTE

JUDGEMENT AS TO REMAINING TIME MUST REST ENTIRELY WITHIN THE EXPERIENCE OF THE DISCOVERER/ REPORTING PERSONNEL TO THE BEST OF HIS/THEIR ABILITIES.

8.4 APOLLO/SATURN 5 APOLLO FLIGHT CREW EMERGENCY PROCEDURES, LAUNCH COMPLEX 39, TCP NO. (RED BOOK) WILL BE IN EFFECT FOR THE PERIOD STATED IN PARAGRAPH 8.2 AND 8.3.

9.0 SAFING/SECURING DURING AND AFTER EMERGENCY EGRESS

INITIATION

9.1 AFTER INITIATION OF EGRESS (RED BOOK) PROCEDURES (CREW CLEAR OF PAD) CVTS WILL REFER TO MSTC FOR CSM SECURING. CVTS WILL FOLLOW APPLICABLE PROCEDURES OF APOLLO/SATURN V SPACE VEHICLE TEST SUPERVISOR EMERGENCY PROCEDURES (TCP V-46001).

9.2 SAFING/SECURING AFTER ABORT (LES INITIATED)

IF AN LES ABORT OCCURS AND LEAVES THE SERVICE MODULE INTACT WITH THE FLYAWAY UMBILICAL IN PLACE PERFORM THE FOLLOWING STEPS.

MSTC — MONITOR TV. ACTIVATE WATER FIREX SYSTEM AND/OR GN2 DELUGE SYSTEM AS REQUIRED.

NOTE

1. MONITOR O2 AND H2 TANK PRESSURES. TANK PRESSURES MAY BE REDUCED BY PURGING THRU FUEL CELLS. POWER IS REQUIRED FOR THIS OPERATION. IF POWER IS REMOVED, CRYO TANKS CAN STILL RELIEVE THRU RELIEF VALVES. DO NOT COMPLETELY POWER DOWN UNTIL EVALUATION CAN BE MADE UNLESS A CATASTROPHIC EVENT IS IMMINENT.

2. TO REMOVE POWER COMPLETELY, FROM SM, PERFORM THE FOLLOWING STEPS.

MSTC	MEPS	REMOVE POWER FROM SERVICE MODULE.		
MEPS	MEPE	SM MTR SWITCH CLOSE - OFF	KC7636	R102
MEPL		MTR SW OPEN LITE ON	SC2410	
MEPS	CSGS	GND PS EMERGENCY CUT OFF SW - ON		

MEPS MSTC POWER REMOVED FROM SM.

MSTC ALL SM SECURED.

9.3 SAFING/SECURING AFTER EMERGENCY EGRESS (LES NOT INITIATED).

SAFING/SECURING AFTER EMERGENCY EGRESS

MSTC MSEQ VERIFY THE FOLLOWING

EDS VOTE 1 OUT LITE OFF	CD0132
EDS VOTE 2 OUT LITE OFF	CD0133
EDS VOTE 3 OUT LITE OFF	CD0134

NOTE

SHOULD THE ABOVE LITES NOT READ AS SPECIFIED IT WOULD REQUIRE, AFTER EVALUATION, SENDING PERSONNEL TO TURN THE EDS POWER SW ON PANEL 7 TO THE OFF POSITION.

MEPS MSEQ MECS INDICATE PWR - OFF KD7021 R084

MSEQ

SMJC A SAFE LITE OFF	SP0352
SMJC B SAFE LITE OFF	SP0353
LOGIC BUS SAFE LITE OFF	CD0088
PYRO BUS SAFE LITE OFF	CD0218
MESC SYS A SAFE LITE OFF	CD0084
MESC SYS B SAFE LITE OFF	CD0085

NOTE

1. MONITOR O2 AND H2 TANK PRESSURES. TANK PRESSURES MAY BE REDUCED BY PURGING THRU FUEL CELLS. POWER IS REQUIRED FOR THIS OPERATION. IF POWER IS REMOVED, CRYO TANKS CAN STILL RELIEVE THRU RELIEF VALVES. DO NOT COMPLETELY POWER DOWN UNTIL CATASTROPHIC EVENT IS IMMINENT.

2. TO REMOVE POWER COMPLETELY FROM SM, PERFORM THE FOLLOWING STEPS.

MSTC	MEPS	REMOVE POWER FROM SERVICE MODULE.		
MEPS	MEPE	SM MTR SWITCH CLOSE - OFF	KC7636	R102
MEPE		MTR SW OPEN LITE ON	SC2410	
MEPS	CSGS	GND PS EMERGENCY CUT OFF SW - ON		
MEPS	MSTC	POWER REMOVED FROM SM.		
MSTC	ALL	SM SECURED.		

10.0 RADIATION INCIDENT

IN THE EVENT OF FIRE OR EXPLOSION INVOLVING EVA ASSEMBLIES, CVTS WILL DIRECT A COMPLETE RADIOLOGICAL SURVEY BE CONDUCTED BY THE NR INDUSTRIAL (RADIOLOGICAL) SAFETY REPRESENTATIVE TO DETERMINE THE EXTENT OF CONTAMINATION PRIOR TO ENTRY OF PERSONNEL INTO EXPOSURE AREA. FIRE FIGHTING PERSONNEL WILL BE SURVEYED BEFORE LEAVING THE AREA FOLLOWING SUCH INCIDENT. KSC SYSTEMS SAFETY, KSC RAD. OFFICER AND ENVIRONMENTAL HEALTH SHALL BE NOTIFIED IMMEDIATELY OF INCIDENT.

DONALDSON C W	695 561 AB85	1			K-0007V1	NR	DOWNEY
REDDING, G.	642 075 FC96	1	P	1	K-0007V1	NR	DOWNEY
BLAIR L W	NR MSC FC3	6			K-0007V1	MSC	HOUSTON
GOLIK S	ZK 25	10			K-0007V1	MSO	RM 3151
LEE R M	ZK 86	1	P	1	K-0007V1	MSO	RM 3178
GRUMM J	ZK 15	1			K-0007V1	MSO	RM 3191
FOUTS W	695 430 FB65	1			K-0007V1	NR	DOWNEY
JARED, L	ZK 28	3			K-0007V1	VAB	RM 2M16
WEISMOSE J	ZK 69	1			K-0007V1	MSO	RM 3187

HAINSEY M	ZK 30	F	1	P	1	K-0007V1	MSO	RM 3188
AUMAN R	ZK 60		2	P	1	K-0007V1	MSO	RM 3028
RADUGGE R	ZK 61		15	P	1	K-0007V1	MSO	RM 1245
MEWBORN J	ZK 61		2	P	1	K-0007V1	MSO	RM 1245
BLACK C E	ZK 8K		30	P	1	K-0007V1	LC39A	TR 004
CLOYD L	ZK 49		2	P	2	K-0007V1	MSO	RM 3056
WAGONER R	ZK 49		1	P	1	K-0007V1	MSO	RM 3056
HARMON G B	ZK 19		2	P	2	K-0007V1	MSO	RM 3056
WARNER A	ZK 54		6	P	1	K-0007V1	MSO	RM 3064
MINOR R	ZK 69		8	P	3	K-0007V1	MSO	RM 3187
SKINNER I W	ZK 27		1			K-0007V1	MSO	RM 3067
SHANKS R G	ZK 27		1			K-0007V1	MSO	RM 3067
PEREZ C A	ZK 24		1			K-0007V1	MSO	RM 3067
KARDAS R B	ZK 27		1			K-0007V1	MSO	RM 3067
FILE W H	ZK 27		1			K-0007V1	MSO	RM 3168
SUNDERMAN R L	ZK 8F		1			K-0007V1	LC39A	TRL 161
BJERNING, E	ZK 86		3			K-0007V1	MSO	RM 3178
COOLIDGE K D	ZK 86		2			K-0007V1	MSO	RM 3178
OWENS J	ZK 95		1			K-0007V1	MSO	RM 3177
BRADFORD O	ZK 95		1			K-0007V1	MSO	RM 3177
D'ALLI	ZK 95		1			K-0007V1	MSO	RM 3177
CIOFFOLETTI M	ZK 27		2	P	2	K-0007V1	MSO	RM 3168
HOFMANN G	ZK 27		1	P	1	K-0007V1	LC39A	TRL 240
TRIBE J	ZK 27		1	P	1	K-0007V1	MSO	RM 3168
BYRD P	ZK 23		4	P	2	K-0007V1	MSO	RM 3167
SUMERLIN C	ZK 86		1			K-0007V1	LC39A	TRL 285
BIGELOW W	ZK 3A		1			K-0007V1	VAB	RM 30E11A
BOWER D	ZK 76		1			K-0007V1	MSO	RM 3082
EDSON W	ZK 21		1			K-0007V1	MSO	RM 3084
TUBRIDY E	ZK 75		1	P		K-0007V1	MSO	RM 3080
HEILMAN H	ZK 75		3		1	K-0007V1	MSO	RM 3080
SCHOULTZ P	ZK 64		5		1	K-0007V1	MSO	RM 3173
CROSKEYS H	ZK 86		4			K-0007V1	MSO	RM 3178
HAIGHT B	ZK 86		1			K-0007V1	MSO	RM 3178
LESTER W	ZK 58		2			K-0007V1	MSO	RM 3167
HINDI M	ZK 75		3	P	1	K-0007V1	MSO	RM 3080
KLEIN D	ZK 20		4	P	1	K-0007V1	MSO	RM 3077
TDS BACKUP	ZK 25		30	P	6	K-0007V1	MSO	RM 3151
ALEGUAS S	ZK 54		1			K-0007V1	MSO	RM 3064
LINDSAY T H	ZK 54		1	P	1	K-0007V1	MSO	RM 3064
GAST G	ZK 45		3	P	2	K-0007V1	MSO	RM 3141
WRIGHT D	ZK 45		3	P	2	K-0007V1	MSO	RM 3160
PYLE R	ZK 48		1			K-0007V1	MSO	RM 3074
EMBODY B	ZK 89		2			K-0007V1	MSO	RM 3070
ATTAWAY F J	ZK 27		1			K-0007V1	MSO	RM 3168
SATELITE UNIT	ZK 8K		5			K-0007V1	LC39A	TRL 284
ROGERS W A	695 451 FB07		1			K-0007V1	NR	DOWNEY
HAFNER D	695 621 FB31		5	P	1	K-0007V1	NR	DOWNEY
SPANGLER R	695 315 FB45		1			K-0007V1	NR	DOWNEY
HIRAHARA F	695 611 FB90		2	P	1	K-0007V1	NR	DOWNEY
SWANSON R L	695 614 FB91		5	P	5	K-0007V1	NR	DOWNEY