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TCP NO. SV-41400R
DATE JUNE 15, 1973
REVISION ORIGINAL
EFFECTIVITY SKYLAB R

JOHN F. KENNEDY
SPACE CENTER

SKYLAB RESCUE
SPACE VEHICLE
OAT #1
PLUGS IN TEST

RELEASED
FOR RESCUE

THIS TCP CONTAINS
HAZARDOUS OPERATIONS

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TOTAL NUMBER OF PAGES IN THIS DOCUMENT IS 44 CONSISTING OF THE FOLLOWING:

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REVISION	REASON/SUPPORTING DOCUMENTATION
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TEST OUTLINE

SPACE VEHICLE OVERALL TEST #1 (PLUGS IN)

1.0 PURPOSE

THE PURPOSE OF THIS TEST IS TO DEMONSTRATE COMPATIBILITY OF THE SPACE VEHICLE SYSTEMS, THE GROUND SUPPORT EQUIPMENT AND OFF-SITE SUPPORT FACILITIES BY PROCEEDING THROUGH A SIMULATED LAUNCH COUNTDOWN, LIFTOFF, AND FLIGHT.

1.1 TEST OBJECTIVE

THE OBJECTIVE OF THIS TEST IS TO SATISFY THOSE SPACE VEHICLE TEST AND CHECKOUT REQUIREMENTS SPECIFIED IN THE TEST AND CHECKOUT REQUIREMENTS MATRIX SECTION OF THE SKYLAB TEST AND CHECKOUT PLAN.

1.2 CONSTRAINTS AND GUIDELINES

1.2.1 TEST CONFIGURATION

PRIOR TO THE START OF THE TEST, THE LAUNCH VEHICLE AND CSM WILL BE MECHANICALLY AND ELECTRICALLY MATED. THE MOBILE LAUNCHER AND SPACE VEHICLE WILL BE LOCATED AT THE PAD. ALL ORDNANCE SIMULATORS, INFLIGHT SEPARATION SIMULATORS, FUSE BOXES AND ELECTRICAL BY-PASS JUMPERS WILL INSTALLED. ACE CARRY-ON EQUIPMENT WILL BE CONNECTED. THE SPACECRAFT AND LAUNCH VEHICLE HEAVY ORDNANCE WILL BE INSTALLED, BUT NOT CONNECTED.

1.2.2 SIMULATION OF FUNCTIONS

THE FUNCTIONS OF PROPELLANT LOADING, UMBILICAL EJECTION, HOLDDOWN ARM RELEASE, SERVICE ARM RETRACTION, AND LIFTOFF WILL BE SIMULATED. INFLIGHT SEPARATION WILL BE SIMULATED. AN EXTERNAL POWER SOURCE WILL SUPPLY LAUNCH VEHICLE POWER FOLLOWING POWER TRANSFER TO INTERNAL. IU COMMANDS WILL BE SIMULATED BY THE DIGITAL COMMAND SYSTEM (DCS).

1.2.3 OPERATIONAL CONSTRAINTS AND GUIDELINES

A. FLIGHT PROGRAMS AND SEQUENCERS WILL OPERATE ON ACCELERATED TIME SCALE WHEN POSSIBLE.

B. MANNED PARTICIPATION IN THE CSM IS REQUIRED.

C. LAUNCH SUPPORT EQUIPMENT WILL BE CONFIGURED TO INSURE AGAINST ACTUATION OF UMBILICALS, SERVICE ARMS, TAIL SERVICE MASTS, HOLDDOWN ARMS, AND INDUSTRIAL WATER SYSTEMS.

1.2.4 SAFETY

THE OVERALL TEST (PLUGS IN) IS CONSIDERED TO BE HAZARDOUS BECAUSE SPACE VEHICLE HEAVY ORDNANCE IS INSTALLED. ALSO, HAZARDOUS OPERATIONS, SUCH AS APPLICATION OF HYDRAULICS AND PNEUMATICS, VENTING OF TANKS, AND GIMBALING OF ENGINES OCCUR IN LOCALIZED AREAS.

1.3 TEST DESCRIPTION

ALL APPLICABLE SYSTEMS OF THE LAUNCH VEHICLE, SPACECRAFT, AND GSE WILL BE PREPARED AND CONDITIONS FOR PREPARATIONS COMPLETE WILL BE ACHIEVED. THE AUTOMATIC SEQUENCE WILL GENERATE STIMULI TO THE GSE THROUGH COMMIT AND SIMULATED LIFTOFF. UMBILICAL EJECTION, HOLDDOWN ARM RELEASE, AND SERVICE ARM RETRACTION WILL BE SIMULATED IN THE ESE. PRIOR TO START OF TERMINAL COUNT SEQUENCE (TCS), SV EDS CHECKS WILL BE MADE; AND THE DDP 224 DISPLAY COMPUTER WILL BE FAILED WITH SWITCHOVER TO ALTERNATE FIRING ROOM VERIFIED; A FORCE JUMP WILL BE INITIATED IN THE ML COMPUTER; AND AUTOMATIC RECOVERY WILL BE VERIFIED.

AFTER START OF TCS THE ML AND LCC 110A COMPUTERS WILL BE FAILED TO VERIFY LAUNCH CAPABILITY WITHOUT THE GROUND COMPUTER SYSTEMS.

A COMPLETE FLIGHT MISSION WILL BE RUN EMPLOYING TB UPDATES. RANGE SAFETY COMMANDS WILL BE SENT TO CHECK THE RSCR SYSTEM, AND THE SPACECRAFT.

A SC/LV TEST WILL BE PERFORMED TO VERIFY PROPER OPERATION TO THE ASTRONAUT'S HAND CONTROLLER WITH THE S-IVB CONTROL SYSTEM.

LIST OF REFERENCES

1. LAUNCH VEHICLE OPERATIONS FOR SPACE VEHICLE OVERALL TEST #1 (PLUGS IN), V-20117.
2. SPACECRAFT OPERATIONS FOR SPACE VEHICLE PLUGS IN TEST, K-0006.
3. SKYLAB SPACE VEHICLE PLUGS IN OAT #1 OPERATIONS INTERFACE CONTROL CHART.
4. SKYLAB 1/SKYLAB 2 AND SUBSEQUENT LC-39 LAUNCH OPERATIONS INSTRUCTIONS, 600-26-002.
5. ASTP/SKYLAB - SATURN IB SPACE VEHICLE TEST SUPERVISOR EMERGENCY PROCEDURES, SV-46101,
6. SKYLAB 2, 3, 4, RESCUE TEST AND CHECKOUT PLAN, VOLUME 1, KHB 8635.5/LO.
7. KSC CALL SIGN HANDBOOK, 630-23-0001.
8. GROUND SAFETY PLAN, KV-053.
9. SECURITY PLAN, KV-052.
10. SKYLAB PART I RD 20006.

ACCESS CONTROL

CONTROL OF PERSONNEL IN THE LAUNCH COMPLEX 39 OPERATION AREA IS MANDATORY DUE TO HAZARDOUS CONDITIONS IN LOCALIZED AREAS.

THE CONTROL OF PERSONNEL IN THE OPERATIONAL AREA IS UNDER THE DIRECTION OF THE TEST SUPERVISOR. THE GROUND SAFETY PLAN AND THE SECURITY PLAN WILL GOVERN DURING THE SV PLUGS IN TEST. THE NUMBER OF PERSONNEL EXPOSED TO HAZARDOUS OPERATIONS WILL BE CONTROLLED BY THE HAZARDOUS OPERATIONS MANLOADING DOCUMENT AS APPROVED BY THE TEST SUPERVISOR AND KSC SAFETY FOR ALL OPERATIONS, ANY CHANGES TO MANLOADING DURING THE PERFORMANCE OF THE TEST/OPERATION MUST HAVE THE CONCURRENCE OF THE KSC SAFETY REPRESENTATIVE.

INTERCOMMUNICATIONS INFORMATION

ALL-AREA-PAGING FM PA

TO BE USED FOR ALL AREA ANNOUNCEMENTS SUCH AS, PERSONNEL CLEARING FOR ORDNANCE OPERATIONS IN THE VAB OR FOR EMERGENCIES. (THE TOGGLE SWITCH FOR THE MICROPHONE ON THE TEST SUPERVISOR'S CONSOLE WILL BE IN THE EMERGENCY POSITION.)

PAGING (CH.) 188 (PA)

TO BE USED FOR OPERATIONAL ANNOUNCEMENTS WITHIN THE OPERATIONAL AREA OF A SPECIFIC OIS MISSION BUS. PA OPERATES AT LAUNCH COMPLEX 39, INCLUDING THE VAB, LCC, AND PADS. PA DOES NOT GO TO THE CIF OR O&C BUILDINGS.

OPERATIONAL INTERCOMMUNICATIONS SYSTEM (OIS)

THE TEST AND CHECKOUT OPERATIONAL COMMUNICATIONS ARE UTILIZED AS ASSIGNED OR INDICATED IN THE PROCEDURE FOR THE TEST OPERATIONS. COORDINATION BY THE SPACE VEHICLE TEST SUPERVISOR WILL NORMALLY BE CONDUCTED OVER OIS CHANNEL 181. IF THE TEST SUPERVISOR IS UNABLE TO REACH AN ORGANIZATION ON OIS CHANNEL 181, ONLY THEN WILL HE SWITCH TO THAT ORGANIZATION'S PRIMARY ASSIGNED CHANNEL. TEST SUPERVISORY PERSONNEL SHOULD ALWAYS BE AVAILABLE ON THE FOLLOWING CIRCUITS

SPACE VEHICLE TEST SUPERVISOR (NASA-LO)	181
TEST SUPPORT CONTROLLER (NASA-TS)	121
LAUNCH VEHICLE TEST CONDUCTOR (NASA-LV)	261
CSM SPACECRAFT TEST CONDUCTOR (NASA-LS)	212
SYSTEMS SAFETY (NASA-SF)	125
S-IB TEST CONDUCTOR (CHRYSLER)	231
GSE TEST CONDUCTOR (BOEING)	266
S-IVB TEST CONDUCTOR (MDAC)	241
IU TEST CONDUCTOR (IBM)	251
INSTRUMENTATION CONTROLLER (NASA-IN)	116
SUPPORT CONTROLLER (NASA-SO)	122
INSTALLATION SUPPORT CONTROLLER (NASA-IS)	114

SPACE VEHICLE TEST SUPERVISOR OIS SPECIAL COORDINATION CHANNEL

CHANNEL 174 HAS BEEN DELEGATED TO THE SV TEST SUPERVISOR AS AN AUXILIARY CHANNEL. THIS CHANNEL WHICH IS CO-SHARED WITH ATM ATTITUDE AND POINTING CONTROL SYSTEMS OPERATIONS MAY BE UTILIZED AT THE DISCRETION OF THE SV TEST SUPERVISOR TO RESOLVE PROBLEMS INVOLVED WITH TEST SUPPORT ACTIVITIES AND FOR CONFERENCE DISCUSSIONS WITH THE KSC WEATHER STATION.

SUPERINTENDENT OF RANGE OPERATIONS (SRO)

THE SRO HAS ACCESS TO OIS CHANNELS 181, 121, 261, AND 264. THE TEST SUPERVISOR WILL REQUEST THE SRO TO SWITCH TO ONE OF THESE CHANNELS WHEN HIS ACTIVE PARTICIPATION IS REQUIRED. NORMALLY, THE SRO WILL MONITOR ROUTINE TEST COMMUNICATIONS WITH THE TEST SUPERVISOR.

PAD TEST SUPERVISOR (PVTS)

AN ASSISTANT TEST SUPERVISOR WILL BE LOCATED AT THE PAD DURING TIMES OF OPEN PAD CONDITIONS TO MONITOR THE OPERATIONS AND ASSESS PROBLEM AREAS FOR THE TEST SUPERVISOR. HE WILL COORDINATE OPERATIONS AT THE PAD FOR THE TEST SUPERVISOR AND WILL UTILIZE OIS CHANNEL 181.

OIS SYSTEM TROUBLE REPORTING

TO REPORT TROUBLES OR REQUEST ASSISTANCE IN THE USE OF THE OIS SYSTEM, CONTACT JROL (ALL AREAS). OR YROL (O&C, CIF) ON OIS CHANNEL 117. IF TROUBLE PREVENTS USE OF OIS, CONTACT COMMUNICATIONS CONTROL CONSOLE ON 867-4141.

HEADSET INTEGRITY CHECK

A HEADSET, HEADSET CORD, AND EXTENDER CABLE INTEGRITY CHECK WILL BE MADE BY EACH USER OF THE OIS SYSTEM EACH TIME HE COMES ON STATION TO SUPPORT THE SPACE VEHICLE LAUNCH COUNTDOWN.

WHEN COMING ON STATION, HE WILL REPORT TO HIS IMMEDIATE SUPERVISOR USING ONE OF THE FOLLOWING PROCEDURES

A. IF THE HEADSET IS CONNECTED DIRECTLY TO AN OIS-RF END INSTRUMENTS

1. SELECT YOUR SUPERVISOR'S PRIME CHANNEL ON THE ACTIVE DIAL.

2. REPORT TO YOUR SUPERVISOR STATING CALL SIGN AND POSITION.

3. SELECT CHANNEL 274 ON THE MONITOR DIAL. A 1000 HZ TONE WILL BE HEARD.

4. GIVE A SHORT COUNT, E.G. 1, 2, 3, 4, 5, --- 5, 4, 3, 1, 1 ON YOUR ACTIVE CHANNEL.

5. THE SUPERVISOR MONITOR DIAL SHOULD NOT BE SET TO CHANNEL 274.

IF THE SUPERVISOR HEARS THE 1000 HZ TONE, THE HEADSET IS UNSATISFACTORY AND SHOULD BE REPORTED THROUGH ESTABLISHED CHANNELS.

IF THE SUPERVISOR DOES NOT HEAR THE 1000 HZ TONE, THE HEADSET IS SATISFACTORY.

B. IF THE HEADSET IS CONNECTED TO AN EXTENDER CABLE

1. REPEAT ITEMS A.1 THROUGH 5.

2. IF THE RESULTS ARE UNSATISFACTORY (SUPERVISOR HEARS 1000 HZ TONE), THE FOLLOWING IS REQUIRED TO ISOLATE THE PROBLEM TO HEADSET OR EXTENDER CABLE

(A) REMOVE HEADSET FROM EXTENDER CABLE AND CONNECT DIRECTLY TO NEAREST AVAILABLE OIS-RF INSTRUMENTS.

(B) REPEAT ITEMS A.1 THROUGH 5.

(C) IF RESULTS ARE STILL UNSATISFACTORY, THE PROBLEM IS IN THE HEADSET OR HEADSET CORD.

(D) IF THE RESULTS ARE SATISFACTORY, THE PROBLEM IS IN THE EXTENDER CABLE.

THE UNSATISFACTORY COMPONENT SHOULD BE REPORTED THROUGH ESTABLISHED CHANNELS.

NOTE

THIS CHECK IS APPLICABLE AT THE O&C AND LC-39.

THOSE USERS HAVING AUDIO CAPABILITY (TYPE 51 UNIT) SHOULD NOT ACCESS ANY OIS CHANNELS THROUGH THE AUDIO SYSTEM FOR THIS CHECK.

END OF HEADSET INTEGRITY CHECK

SV OAT #1 (PLUGS IN) - RESCUE VEHICLE APOLLO/SATURN

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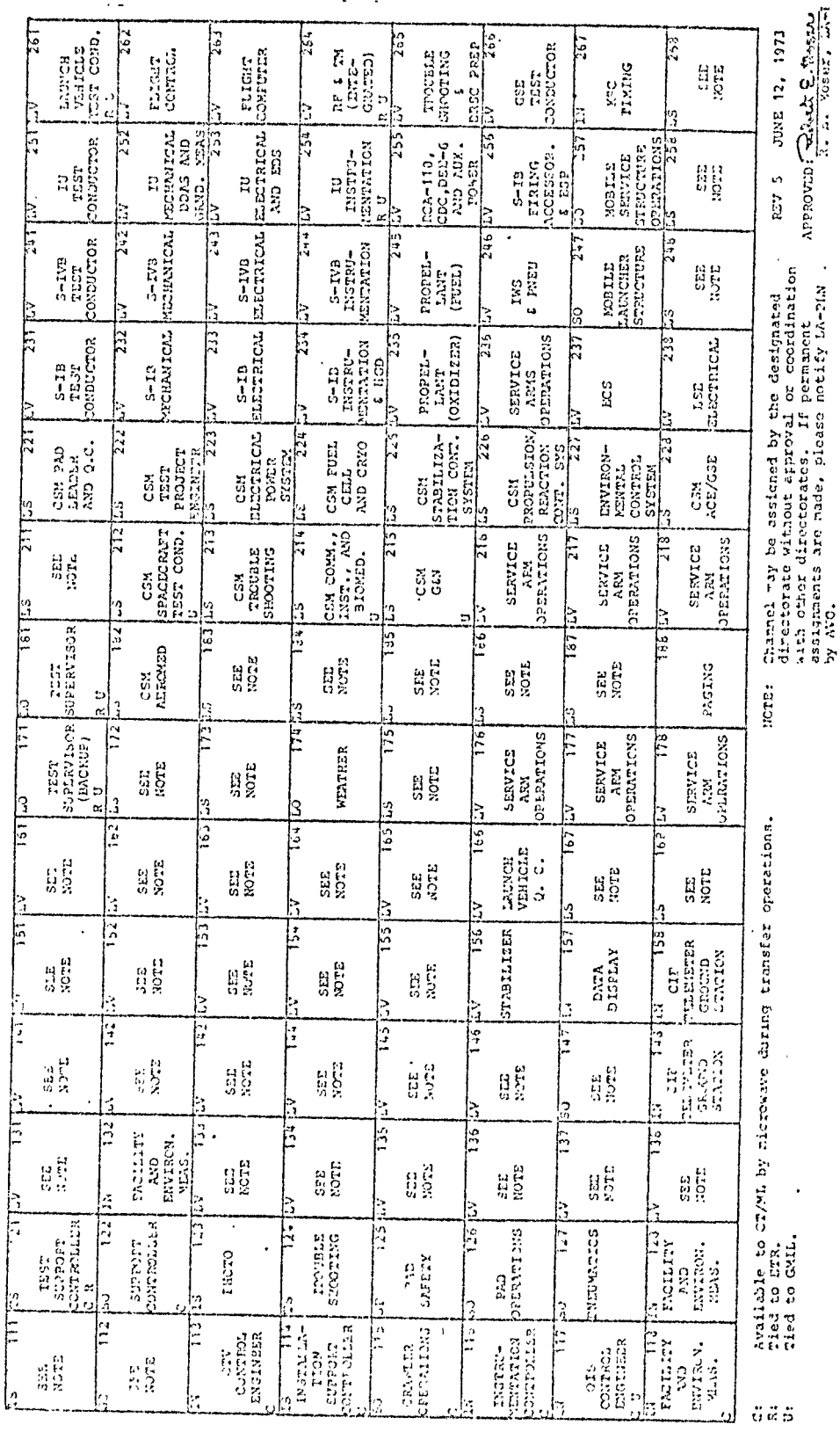
VEHICLE SKYLAB R



C: Available to CF/ML by microwave during transfer operations.
R: Tied to ETR.
U: Tied to GMIL.

NOTE: Channel may be assigned by the designated directorate without approval or coordination with other directorates. If permanent assignments are made, please notify LA-2LN by ANO.

REV 5 JUNE 12, 1973

APPROVED: Frank G. Vosseller

KSC FORM 23-61 D (6/64)

OPERATING STATIONS

TEST CONDUCTORS AND TEST MANAGEMENT PERSONNEL

CLO	LAUNCH DIRECTOR (NASA)
LOM	LAUNCH OPERATIONS MANAGER (NASA)
CVTS	SPACE VEHICLE TEST SUPERVISOR (NASA)
MSTC	SPACECRAFT TEST CONDUCTOR (CSM/NASA)
CLTC	LAUNCH VEHICLE TEST CONDUCTOR (NASA)
CTSC	TEST SUPPORT CONTROLLER (NASA)
CUTC	IU STAGE TEST CONDUCTOR (IBM)
C3TC	S-1B STAGE TEST CONDUCTOR (CHRYSLER)
C1TC	GSE STAGE TEST CONDUCTOR (BOEING)
C4TC	S-IVB TEST CONDUCTOR (MDAC)
BOSC	SUPPORT CONTROLLER (NASA)
BTIS	INSTALLATION SUPPORT CONTROLLER (NASA)
CGIC	INSTRUMENTATION CONTROLLER (NASA)

SYSTEMS SAFETY

CPSS	SYSTEMS SAFETY

LAUNCH OPERATIONS SECURITY

CTNS	SECURITY CONTROLLER

RANGE SUPPORT

CRSS	RANGE SAFETY SUPERVISOR'S PANEL
GUIL	UNIFIED S-BAND GROUND STATION
RSO	RANGE SAFETY OFFICER
SRO	SUPERINTENDENT OF RANGE OPERATIONS

FLIGHT CONTROL (MCC)

NFLT	FLIGHT DIRECTOR, HOUSTON

OPERATIONS PERSONNEL

RSPT	CSM PILOT, BACK-UP
FLACH	
BOSS	LAUNCH SITE RECOVERY FORCES COMMANDER
MGCC	GROUND COMPUTER COMPLEX FIRING ROOM
SLTM	TM SYSTEMS ENGINEER
SLRF	LV DRSCR SYSTEMS ENGINEER
SPHO	PHOTO COORDINATOR

BOTV	OTV CONTROLLER
BWIC	WIDEBAND SYSTEM CENTER/AAS POWER-RECORDER OPERATOR
BTMC	TM C/O EQUIPMENT, COMM. MODULE ROOM 2P10
CEDK	CRT KEYBOARD - EDS DCC OPERATOR
CLGK	CRT KEYBOARD - GUIDANCE COMPUTER
CLVN	VEHICLE NETWORKS CONSOLE
CSAT	TEST CONDUCTOR, S/C ASST.
CSA9	SERVICE ARM 9 CONTROL CONSOLE, COMM. MOD.
CSPP	SERVICE ARMS POWER PANEL
CSTO	ASTRO COMM.
CUES	EDS PREPARATION
CUEV	EVENTS DISPLAY (IU)
CUNP	NETWORKS PANEL
CUSW	NETWORKS SWITCH SELECTOR PANEL
CWCP	INDUSTRIAL WATER CONTROL PANEL
CLMS	MECHANICAL SYSTEMS ENGINEER
C1CS	CUTOFF SENSORS PANEL
C1DP	PROPELLANT DISPERSION AND ORDNANCE (DESTRUCT) PANEL
C1FC	FLIGHT CONTROL RECORDERS
C1FP	FIRING CONSOLE AND COMPONENT TEST PANEL
C1LO	LOX SYSTEM PANEL
C1NP	NETWORKS PANEL (S-IC)
C1PP	POWER PANEL (DC)
C1SP	SEQUENCER PANEL
C2DP	PROPELLANT DISPERSION PANEL
C1NP	NETWORKS PANEL (S-II)
ETMS	TELEMETRY GROUND STATION (CIF)
HARDTOP	PAD EGRESS TEAM COMMANDER
LIEF	LAUNCH INFORMATION EXCHANGE FACILITY
MACE	ACE TEST DIRECTOR, GE
MLFC	FUEL CELL UNIT 12, S/C
MTPE	NR TEST PROJECT ENGINEER, UNIT 10, S/C
PEHE	ENVIRONMENTAL HEALTH ENGINEER
PVSS	SYSTEMS SAFETY (PAD)
PVTS	PAD TEST SUPERVISOR
SCDR	CSM COMMANDER
SEHZ	MSS HAZARDS MONITOR OPERATOR
UGCU	WATER GLYCOL CONTROL UNIT OPERATOR
UWGR	GLYCOL REFRIGERATION UNIT, S/C

VUMS	IU MEASURING SET STATION
VURF	C-BAND RADAR (AM) GCS CHECKOUT
Z1	ABORT MONITOR VISUAL OBSERVER UC-4 (PAD A), UC-12 (PAD B)
Z2	ABORT MONITOR VISUAL OBSERVER UC-16 (PADS A & B)
Z3	ABORT MONITOR VISUAL OBSERVER UC-17 (PADS A & B)

LIST OF ABBREVIATIONS/ACRONYMS

AAC	ABORT ADVISORY CHANNEL
AAS	ABORT ADVISORY SYSTEM
ACE	ACCEPTANCE CHECKOUT EQUIPMENT
ACS	ASTRO-COMMUNICATION SYSTEM
AFETR	AIR FORCE EASTERN TEST RANGE
AIU	ABORT INTERFACE UNIT
ALC	ASTRO LAUNCH CIRCUIT
ALDS	APOLLO LAUNCH DATA SYSTEM
ALSA	ASTRONAUT LIFE SUPPORT ASSEMBLY
AM	AMPLITUDE MODULATED; AIRLOCK MODULE
APS	AUXILIARY PROPULSION SYSTEM (SWS)
ATM	APOLLO TELESCOPE MOUNT
ATMDC	ATM DIGITAL COMPUTER
BP	BOILERPLATE
BPC	BOOST PROTECTIVE COVER
CADFISS	COMPUTATION AND DATA FLOW INTEGRATED SUBSYSTEM
CASTS	COUNTDOWN AND STATUS TRANSMITTING SYSTEM
CB	CIRCUIT BREAKER
CBRM	CHARGER BATTERY RELAY MODULE
CCATS	COMMUNICATIONS, COMMAND, AND TELEMETRY SYSTEM
CCC	COMPLEX CONTROL CENTER
CCF	CONVERTER COMPRESSOR FACILITY
CCS	COMMAND COMMUNICATIONS SYSTEM
C&D	CONTROL AND DISPLAY (ATM)
CD	COUNTDOWN
CD&SC	CENTRAL DATA AND SWITCHING CENTER
CDC	COUNTDOWN CLOCK
CDDT	COUNTDOWN DEMONSTRATION TEST
CDF	CONFINED DETONATING FUSE
CDU	COUPLING DATA UNIT
C2F2	CREW COMPARTMENT FIT AND FUNCTION
CH	CHANNEL
CIF	CENTRAL INSTRUMENTATION FACILITY
CIU	COMPUTER INTERFACE UNIT
CMD	COMMAND
CMGS	CONTROL MOMENT GYRO SUBSYSTEM
COAS	CREW OPTICAL ALIGNMENT SIGHT
COMM	COMMUNICATION
C/O	CHECKOUT
CRDU	COMMAND RELAY DRIVER UNIT
CRG	CONTROL RATE GYRO
CRT	CATHODE RAY TUBE
CRYO	CRYOGENIC
C/T	CRAWLER/TRANSPORTER
C&W	CAUTION AND WARNING

DA	DEPLOYMENT ASSEMBLY
DADE	DIGITAL ACQUISITION AND DECOMMUTATION EQUIPMENT
DAS	DATA ACQUISITION SYSTEM
DB	DESIGN BURST
DC	DIRECT CURRENT
DCS	DIGITAL COMMAND SYSTEM
DDAS	DIGITAL DATA ACQUISITION SYSTEM
DEE	DIGITAL EVENTS EVALUATOR
DPDM	DOUBLE PULSE DURATION MODULATION
DPF	DIFFERENTIAL PRESSURE FEEDBACK
DRSCS	DIGITAL RANGE SAFETY COMMAND SYSTEM
DRSCR	DIGITAL RANGE SAFETY COMMAND RECEIVER
DTC	DESIGN/TEST CONTRACTOR OR CENTER
DTCS	DIGITAL TEST COMMAND SYSTEM
DTMS	DIGITAL TEST MONITORING SYSTEM
DTS	DATA TRANSMISSION SYSTEM
DTVC	DIGITAL TRANSMISSION AND VERIFICATION CONVERTER
DUA	DIGITAL UPLINK ASSEMBLY
EBW	EXPLOSIVE BRIDGE WIRE
E/C	ENVIRONMENTAL CHAMBER
ECS	ENVIRONMENTAL CONTROL SYSTEM
EDC	EXPERIMENT DEVELOPMENT CENTER
EDS	EMERGENCY DETECTION SYSTEM
EEAP	EMERGENCY EGRESS AIR PACK
EGADS	ELECTRONIC GROUND AUTOMATIC DESTRUCT SYSTEM
EIS	EXPERIMENT INTEGRATION CENTER
E-M	ELECTRO-MECHANICAL
EMC	ELECTROMAGNETIC COMPATIBILITY
EPC	EXPERIMENT POINTING CONTROL
EPS	ELECTRICAL POWER SYSTEM
ERD	EXPERIMENT REQUIREMENTS DOCUMENT
EREP	EARTH RESOURCES EXPERIMENT PACKAGE
ESE	ELECTRICAL SUPPORT EQUIPMENT
ESP	ENGINE SERVICE PLATFORM
ESS	EXPERIMENT SUPPORT SYSTEM
ETR	EASTERN TEST RANGE
EVA	EXTRAVEHICULAR ACTIVITY
FAS	FIXED AIRLOCK SHROUD
FCC	FLIGHT CONTROL COMPUTER (LV)
FDS	FLUID DISTRIBUTION SYSTEM
FM	FREQUENCY MODULATION
FMS	FOOD SERVICE MANAGEMENT (OWS)
FR	FIRING ROOM (LCC)
FSRT	FLIGHT SYSTEMS REDUNDANCY TEST
FT	FUNCTIONAL TEST, FOOT
FTR	FINAL TEST RACK
FWD	FORWARD

G&C	GUIDANCE AND CONTROL
GET	GROUND ELAPSED TIME
GETS	GROUND EQUIPMENT TEST SET
GHE	GASEOUS HELIUM
GH2	GASEOUS HYDROGEN
GLFC	GRAPHITE LM FUEL CASK
GMT	GREENWICH MEAN TIME
GSFC	GODDARD SPACE FLIGHT CENTER
GN2	GASEOUS NITROGEN
GO2(GOX)	GASEOUS OXYGEN
GSE	GROUND SUPPORT EQUIPMENT
HCO	HARVARD COLLEGE OBSERVATORY
HDA	HOLDDOWN ARM
HGDS	HAZARDOUS GAS DETECTION SYSTEM
HOSC	HUNTSVILLE OPERATIONS SUPPORT CENTER
HPG	HIGH PRESSURE GAS
HSS	HABITABILITY SUPPORT SYSTEM
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
H2	HYDROGEN
H2O	WATER
HZ	HERTZ (CYCLES PER SECOND)
ID	IDENTIFICATION
IEU	INTERFACE ELECTRONICS UNIT
IGOR	INTERCEPT GROUND-OPTICAL RECORDER
ILCA	INVERTER LIGHT CONTROL ASSEMBLY (AM/MDA)
IMU	INERTIAL MEASURING UNIT
IP	IMPACT PREDICTOR
IRIG	INERTIAL RATE INTEGRATION GYRO; INTER-RANGE INSTRUMENTATION GROUP
IU	INSTRUMENT UNIT
IVA	INTRA VEHICLAR ACTIVITY
IWS	INDUSTRIAL WATER SYSTEM
KSC	KENNEDY SPACE CENTER
LBNP	LOWER BODY NEGATIVE PRESSURE
LBR	LOW BIT RATE
LC	LAUNCH COMPLEX
LCC	LAUNCH CONTROL CENTER
LCG	LIQUID COOLED GARMENT
LH2	LIQUID HYDROGEN
LIEF	LAUNCH INFORMATION EXCHANGE SYSTEM
LO	LAUNCH OPERATIONS
LOM	LAUNCH OPERATIONS MANAGER
L/O	LIFTOFF
LO2(LOX)	LIQUID OXYGEN
LP	LOW PRESSURE
LRR	LAUNCH READINESS REVIEW

LS	SPACECRAFT OPERATION (OFFICE SYMBOL)
LSC	LINEAR SHAPED CHARGE
LSE	LAUNCH SUPPORT EQUIPMENT
LSR	LAUNCH SITE RECOVERY
LUT	LAUNCH UMBILICAL TOWER
LV	LAUNCH VEHICLE
LVDA	LAUNCH VEHICLE DATA ADAPTER
LVDC	LAUNCH VEHICLE DIGITAL COMPUTER
LVO	LAUNCH VEHICLE OPERATIONS
MAP	MESSAGE ACCEPTANCE PULSE
MCC	MISSION CONTROL CENTER
MDA	MULTIPLE DOCKING ADAPTER
MDF	MILD DETONATING FUSE
MHZ	MEGA-HERTZ
MILA	MERRITT ISLAND LAUNCH AREA
MITTS	MOBILE IGOR TRACKING TELESCOPE SYSTEM
ML	MOBILE LAUNCHER
MODEM	MODULATOR/DEMODULATOR
MOTS	MOBILE OPTICAL TRACKING SYSTEM
MSFC	MARSHALL SPACE FLIGHT CENTER
MSOB	MANNED SPACECRAFT OPERATIONS BUILDING
MSS	MOBILE SERVICE STRUCTURE
OA	ORBITAL ASSEMBLY
OAT	OVERALL TEST
O2	OXYGEN
OIS	OPERATIONAL INTERCOMMUNICATIONS SYSTEM
OICC	OPERATIONS INTERFACE CONTROL CHART
OTV	OPERATIONAL TELEVISION
OWS	ORBITAL WORKSHOP
PA	PUBLIC ADDRESS
PAM	PULSE AMPLITUDE MODULATION
PCG	POWER CONDITIONING GROUP (AM)
PCM	PULSE CODE MODULATION
PCMD	PARTICLE COUNT MONITORING DEVICE
PCS	POINTING CONTROL SYSTEM (ATM)
PD	PROPELLANT DISPERSION
PDS	PROPELLANT DISPERSION SYSTEM
PI	PRINCIPAL INVESTIGATOR
PREPS	PREPARATIONS
PS	PAYLOAD SHROUD
PSI	POUNDS PER SQUARE INCH
PTCR	PAD TERMINAL CONNECTION ROOM
PTCS	PROPELLANT TANKING COMPUTER SYSTEM
PU	PROPELLANT UTILIZATION
PYRO	PYROTECHNIC

QC	QUALITY CONTROL
QD	QUICK DISCONNECT
QLDS	QUICK LOOK DATA STATION
RACS	REMOTE AUTOMATIC CALIBRATION SYSTEM
RADCC	RADIOLOGICAL CONTROL CENTER
RCS	REACTION CONTROL SYSTEM
RF	RADIO FREQUENCY
RICS	RANGE INSTRUMENTATION CONTROL SYSTEM
RLC	ROTATING LITTER CHAIR
RP-1	ROCKET PROPELLANT - 1
ROTI	RECORDING OPTICAL TRACKING INSTRUMENT
RSCR	RANGE SAFETY COMMAND RECEIVER
RSO	RANGE SAFETY OFFICER
RSS	REFRIGERATION SUBSYSTEM
RTC	REAL TIME COMMAND
RTCC	REAL TIME COMPUTER COMPLEX (MCC)
RTCS	REAL TIME COMPUTER SYSTEM (AFETR)
S&A	SAFE AND ARM
SA	SERVICE ARM
SAL	SCIENTIFIC AIRLOCK
SAS	SOLAR ARRAY SYSTEM
SAWS	SOLAR ARRAY WING SIMULATOR
SC	SPACECRAFT
SCAPE	SELF-CONTAINED ATMOSPHERIC PROTECTIVE ENSEMBLE
SCO	SPACECRAFT OPERATIONS
SCS	STABILIZATION AND CONTROL SYSTEM
SHE	SUPERCRITICAL HELIUM
SIM	SIMULATE
SIT	SOFTWARE INTEGRATED TEST
SLCC	SATURN LAUNCH COMPUTER COMPLEX
SLDS	SKYLAB LAUNCH DATA SYSTEM
SLR	SKYLAB RESCUE

SRO	SUPERINTENDENT OF RANGE OPERATIONS
STC	SPACECRAFT TEST CONDUCTOR
STDN	SPACECRAFT TRACKING AND DATA NETWORK
STS	STRUCTURE TRANSITION SECTION
SV	SPACE VEHICLE
SWS	SATURN WORKSHOP
S-IB	SATURN IB LAUNCH VEHICLE
S-IC	SATURN V 1ST STAGE
S-II	SATURN 2ND STAGE
TACS	THRUST ATTITUDE CONTROL SUBSYSTEM (SWS)
TCE	TELEMETRY CHECKOUT EQUIPMENT
TCH	THRUST CHAMBER
TCP	TEST AND CHECKOUT PROCEDURE
TCS	TERMINAL COUNT SEQUENCER; THERMAL CONTROL SYSTEM (ATM)
TDDS	TELEVISION DATA DISPLAY SYSTEM
TDR	TIME DOMAIN REFLECTOMETER
TM	TELEMETRY
TRS	TIME REFERENCE SYSTEM
TSM	TAIL SERVICE MAST
TTY	TELETYPE
UDL	UP-DATA LINK
UHF	ULTRA HIGH FREQUENCY
UMB	UMBILICAL
USB	UNIFIED S-BAND
UV	ULTRAVIOLET
VAB	VEHICLE ASSEMBLY BUILDING
VCG	VECTORCARDIOGRAM
VHF	VERY HIGH FREQUENCY
VLF	VERY LOW FREQUENCY
VMGSE	VEHICLE MEASUREMENT GSE
WCIU	WORKSHOP COMPUTER INTERFACE UNIT
WITS	WEST INTEGRATED TEST STAND
WMS	WASTE MANAGEMENT SYSTEM (OWS)
W/R	WHITE ROOM
Z-LV	Z-AXIS PARALLEL TO LOCAL VERTICAL

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SV OAT #1 (PLUGS IN) RESCUE
DATE: JUNE 15, 1973
REVISION: ORIGINAL

SKYLAB LAUNCH OPERATIONS

SL-R OAT (PLUGS IN) RF MATRIX

REMARKS	LV															CSM		
LV	UHF					SHF		VHF								UHF		S-BAND
	IU-DCS			DRSCS		RADAR BEACON		TELEMETRY										
UP-LINK FREQ MHz	450.0			450.0		5690.0										2106.4		2036.5
DN-LINK FREQ MHz						5765.0		240.2	256.2	258.5	250.7	255.1				2272.5	2287.5	2395.0
SUPPORT	GMIL	ETR	LOCAL	ETR	LOCAL	ETR	LOCAL									GMIL	LOCAL	GMIL
DRSCS CLOSED LOOP TEST			-0 02 55		-0 02 55					-0 02 55								
PREFLIGHT COMMANDS			- 01 58		-0.02 50													
RF AND TM CHECKS POWER TRANSFER DRSCS TEST			C		-0 01:09													
PREFLIGHT COMMANDS DRSCS TEST			-0 00 37															
T -0																		
FLIGHT COMMANDS DRSCS TEST			-0 00 10	C	-0 00 10													
			+0 00 16 30															
			+0:02 30		+0.02.30					+0.02 30								

RF-AM DUPLEX A	RF-AM DUPLEX B				REMARKS
					SC
259.7	296.8				UP-LINK FREQ MHZ
296.8	259.7				DN-LINK FREQ MHZ
GMIL	GMIL				SUPPORT
					T-0

SPACE VEHICLE TIM FREQUENCIES

STAGE	LINK	FREQUENCIES (MHZ)
S-IB	GF-1	240.2
	GP-1	256.2
S-IVB	CP-1	
IU	DF-1	250.7
	DP-1	255.1
CSM		2287.5
		2272.5
RECOVERY BEACONS		
CSM		243.0

LEGEND

ALL RADIATION CLEARANCE ARE OPEN LOOP UNLESS INDICATED BY Ⓒ

Ⓒ CLOSED LOOP CLEARANCE

POTENTIAL INTERFERENCE RF SILENCE

D H M S
T- 0 :00 : 00 : 00 (SECONDS NOT USED UNLESS REQUIRED)

▷ NOT USED DURING THIS TEST

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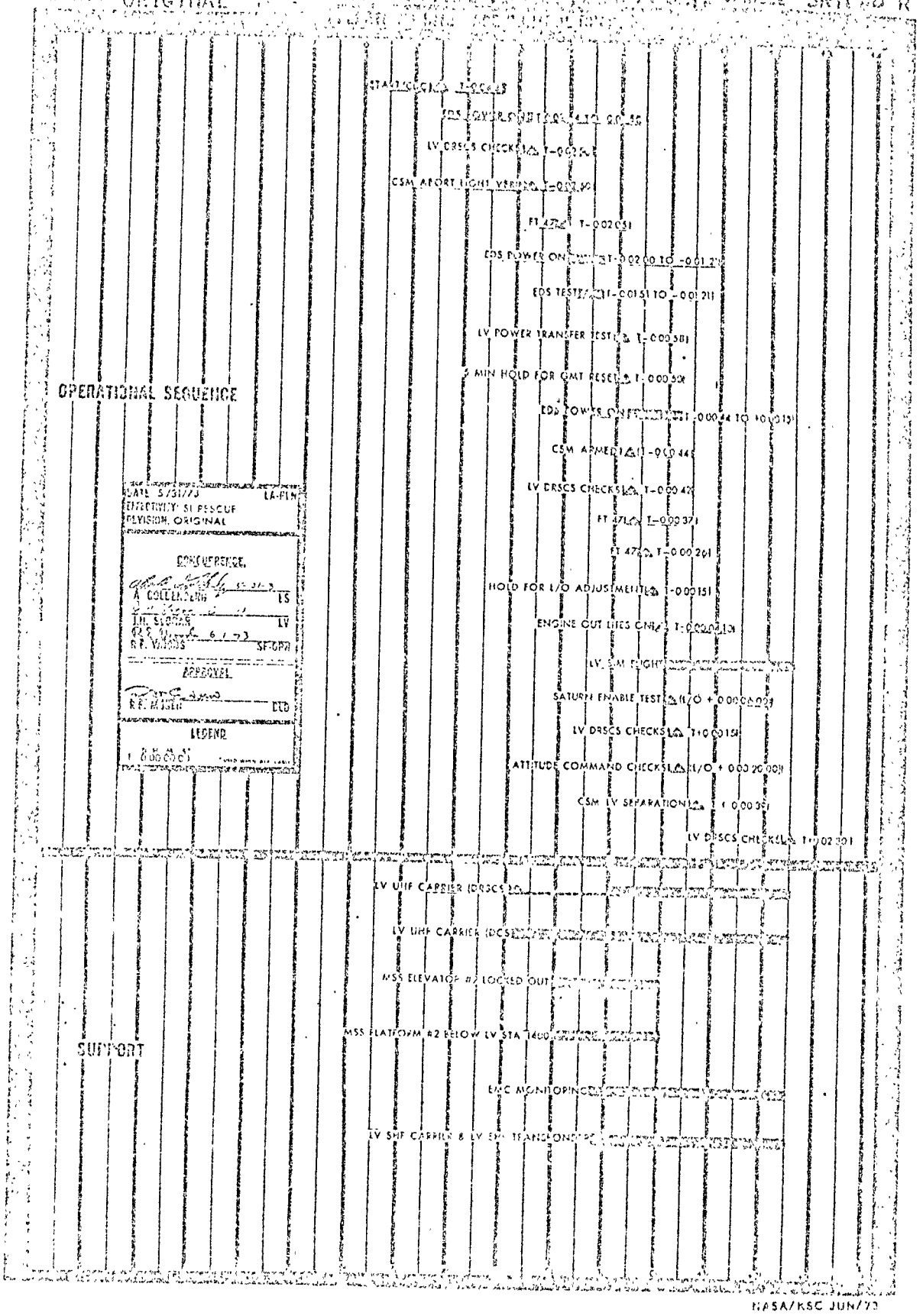
OPERATIONAL SEQUENCE
SUPPORT
START SEQ T-00:45
EDS POWER PORT T-00:44 TO -00:38
LV DRSCS CHECKS T-00:35
CSM ABORT LIGHT VERIFY T-00:30
FT 427 T-00:25
EDS POWER ON T-00:20 TO -00:12
EDS TEST T-00:15 TO -00:11
LV POWER TRANSFER TEST T-00:08
5 MIN HOLD FOR GMT RESET T-00:05
EDS POWER ON T-00:44 TO +00:01
CSM ARMED T-00:44
LV DRSCS CHECKS T-00:42
FT 471 T-00:37
FT 472 T-00:26
HOLD FOR L/O ADJUSTMENTS T-00:15
ENGINE OUT LITES ON T-00:00:10
LV/SM FLIGHT
SATURN ENABLE TEST L/O + 00:00:01
LV DRSCS CHECKS T+00:15
ATTITUDE COMMAND CHECKS L/O + 00:20:00
CSM LV SEPARATION T + 00:30
LV DRSCS CHECKS T+02:30
LV UHF CARRIER (DRSCS)
LV UHF CARRIER (DCS)
MSS ELEVATOR #2 LOCKED OUT
MSS PLATFORM #2 BELOW LV STA 1400
EMC MONITORING
LV SHF CARRIER & LV SHF TRANSPONDER
DATE 5/31/73 LA-PLN
EFFECTIVITY: SL RESCUE
REVISION: ORIGINAL
CONCURRENCE:
A. COLEMAN ES
T.H. SLOZAR LV
R.E. WIGGS SF/OPR
APPROVAL
R.E. MISER ECD
LEGEND
T 0:00:00

TIME	COMM CH	SEQUENCE	COMMAND STA.	RESPONSE STA.	DESCRIPTION	REMARKS
					OPERATING STEPS	
					NOTE HAZARDOUS OPERATIONS ARE DENOTED WITH THE LETTER "H" IN THE REMARKS COLUMN. SYSTEMS SAFETY (CPSS) WILL NOT PARTICIPATE IN THIS TEST. ACQUISITION OF DESTRUCT SYSTEM ENABLE AND TCS ARM KEYS WILL BE ACCOMPLISHED BY LAUNCH VEHICLE OPERATIONS.	
-55 HRS 55' 0"						
	181	1	MSTC	CVTS	VERIFY CLEARANCE TO START TEST. SC POWER WILL BE APPLIED IN APPROXIMATELY 30 MINUTES.	
-52 HRS 55' 0"						
	181	1	MSTC	CVTS	SC POWER UP IS COMPLETE. STARTING SYSTEM TESTING.	
	181	1	CVTS	CLTC MSTC SRO CTSC	VERIFY READY TO PROCEED WITH THE SPACE VEHICLE OVERALL TEST NO. 1.	
	181	2	CLTC	CVTS	LV POWER IS COMING ON.	

TIME	COMM. CH.	SEQUENCE	COMMAND STA.	RESPONSE STA.	DESCRIPTION	REMARKS
-4 HRS 31' 0"	CONTINUED					
	181	3	CLTC	CVTS	PRESET THE CDC AT T-4 HOURS, 31' 0" COUNTING DOWN.	
	181 EM PA	4	CVTS		THE SPACE VEHICLE OVERALL TEST NO. 1 AT PAD B WILL START ON MY MARK AT T-4 HOURS, 31' 0". 5 - 4 - 3 - 2 - 1 - MARK.	
-4 HRS 10' 0"						
	181	1	CVTS	CTSC	AAS POWER BUSSES WILL BE REQUIRED AT T-3 HOURS, 10' 0". HAVE BWIC MONITOR ON CH. 181.	
-4 HRS 5' 0"						
	181	1	BWIC	CVTS	AAS POWER SUPPLIES ARE COMING ON. NOTE POWER BUS LIGHTS ON CONSOLE AB-6 MAY BE ACTIVATED DURING VOLTAGE CHECKS.	
-3 HRS 46' 0"						
	181	1	CLTC	CVTS	LV POWER IS ON.	

T-HR	COMM CH	SEQUENCE	COMMAND STA.	RESPONSE STA.	DESCRIPTION	REMARKS
-3 HRS 15' 0"						
	181	1	CVTS	LOM	VERIFY THE FOLLOWING SWITCHES ON THE ABORT REQUEST PANEL ARE OFF ABORT REQUEST ENABLE, ABORT REQUEST A, AND ABORT REQUEST B.	
	181	2	CVTS	BWIC	TURN ON AAS POWER BUSSES.	
		3		LOM	NOTE THAT THE FOLLOWING LIGHTS ON THE ABORT REQUEST PANEL GO ON POWER SUPPLY 1, 2, 3, AAS SUPPLY, AND ORDNANCE SAFE.	
-2 HRS 55' 0"						
	181	1	CVTS	SRO	VERIFY RADIATION CLEARANCE FOR THE LV LOCAL RANGE SAFETY COMMAND CARRIER FOR DRSCS CLOSED LOOP TEST. PROTECTION IS REQUIRED. VERIFY RADIATION CLEARANCE FOR THE LV LOCAL OPEN LOOP IU COMMAND CARRIER. PROTECTION IS REQUIRED. VERIFY RADIATION CLEARANCE FOR LV FREQUENCIES 240.2, 256.2, 258.5, 250.7, 255.1, 5690 AND 5765 MHZ.	
-2 HRS ...' 0"						
	181	1	MSTC	CVTS	SCDR IS ON CH. 212 FOR ABORT LIGHT VERIFICATION. EDS POWER IS COMING ON.	
	181	2	CVTS	CLTC	SC EDS POWER IS COMING ON. SCDR IS ON CH. 212 FOR ABORT LIGHT VERIFICATION.	

TIME	COMM. CH.	SEQUENCE	COMMAND STA.	RESPONSE STA.	DESCRIPTION	REMARKS
-2 HRS 50' 0"	181	1	CLTC	CVTS	VERIFY CLEARANCE TO BRING UP THE LOCAL RANGE SAFETY COMMAND CARRIER TO SUPPORT DRSCS CLOSED LOOP TEST ON CH. 261. (PROTECTION IS REQUIRED.)	
	181	2	CLTC	CVTS	LV STARTING DRSCS TEST. LOCAL RANGE SAFETY COMMAND CARRIER IS COMING ON.	
					NOTE THE DETAILED SEQUENCES FOR THE ABORT LIGHT VERIFICATION AND THE DRSCS CLOSED LOOP TEST ARE IN THE LV PROCEDURE.	
	181	3	CLTC	CVTS	ABORT LIGHT CHECK COMPLETE. LV NO LONGER REQUIRES EDS POWER.	
	181	4	CVTS	MSTC	ABORT LIGHT CHECK COMPLETE. REQUEST EDS POWER OFF.	
	181	5	CLTC	CVTS	DRSCS CLOSED LOOP TEST IS COMPLETE. LOCAL RANGE SAFETY COMMAND CARRIER IS OFF.	
	181	6	CVTS	SRO	LV LOCAL RANGE SAFETY COMMAND CARRIER IS OFF.	
	181	7	CLTC	CVTS	VERIFY CLEARANCE FOR LOCAL OPEN LOOP IU COMMAND CARRIER. PROTECTION IS REQUIRED. VERIFY CLEARANCE FOR ALL LV RF AND TM SYSTEMS (LV FREQUENCIES 240.2, 256.2, 258.5, 250.7, 259.1, 5690 AND 5765 MHZ.).	

TIME	COMM CH.	SEQUENCE	COMMAND STA.	RESPONSE STA.	DESCRIPTION	REMARKS
-2 HRS 55' 0"	CONTINUED					
	181	8	CLTC	CVTS	LOCAL OPEN IU COMMAND CARRIER AND IU COMMAND RECEIVER/DECODER ARE ON.	
-2 HRS 50' 0"	181	1	MSTC	CVTS	EDS POWER IS OFF.	
-2 HRS 55' 0"	181	1	CVTS	CTSC	VERIFY ALL REQUIRED PERSONNEL AND EQUIPMENT ARE ON STATION READY TO SUPPORT TEST OPERATIONS.	
-2 HRS 50' 0"	181	1	CLTC	CVTS	REQUEST MSS ELEVATOR 2 (WEST) BE LOCKED OUT AT MSS PLATFORM 5 AND MSS PLATFORM 2 BE POSITIONED BELOW LV STATION 1400 TO SUPPORT LONG RANGE THEODOLITE CHECKS.	
	181	2	CVTS	CTSC	LOCK OUT MSS ELEVATOR 2 (WEST) AT MSS PLATFORM 5 AND POSITION MSS PLATFORM 2 BELOW LV STATION 1400 TO SUPPORT LONG RANGE THEODOLITE CHECKS. STATION OPERATOR IN MSS ELEVATOR 1.	H
-2 HRS 0' 0"	181	1	MSTC	CVTS	EDS POWER IS COMING ON.	
	181	2	CVTS	CLTC	SC EDS POWER IS COMING ON.	
	181	3	CTSC	CVTS	MSS ELEVATOR 2 (WEST) IS LOCKED OUT AT MSS PLATFORM 5 AND MSS PLATFORM 2 IS BELOW AND WILL REMAIN BELOW LV STATION 1400 UNTIL AFTER T+2' 0".	

TIME	COMM. CH.	SEQUENCE	COMMAND STA.	RESPONSE STA.	DESCRIPTION	REMARKS
-2 HRS 0' 0"	CONTINUED					
	181	4	CLTC	CVTS	VERIFY THAT ELEVATOR 2 ON WEST SIDE OF MSS IS LOCKED OUT AT PLATFORM 5 AND MSS PLATFORM 2 IS BELOW LV STATION 1400.	
-1 HR 58' 0"						
	181	1	CLTC	CVTS	REQUEST CLEARANCE TO BRING UP THE LV LOCAL CLOSED LOOP IU COMMAND CARRIER. PROTECTION IS NOT REQUIRED.	
	181	2	CVTS	SRO	VERIFY RADIATION CLEARANCE FOR THE LV LOCAL CLOSED LOOP IU COMMAND CARRIER. PROTECTION IS NOT REQUIRED.	
	181	3	CVTS	CLTC	BRING UP LOCAL CLOSED LOOP IU COMMAND CARRIER.	
	181	4	CLTC	CVTS	LOCAL CLOSED LOOP IU COMMAND CARRIER IS ON AND LOCAL OPEN LOOP IU COMMAND CARRIER IS OFF.	
	181	5	CVTS	SRO	LV LOCAL OPEN LOOP IU COMMAND CARRIER IS OFF.	
-1 HR 56' 0"						
	181	1	CVTS	BWIC	TURN ON AAS EVENT RECORDERS AT FAST SPEED.	
-1 HR 55' 0"						
	181	1	CLTC	CVTS	LV READY FOR EDS TEST. REQUEST SCO PERSONNEL SWITCH TO CH. 223.	

TIME	COMM. CH.	SEQUENCE	COMMAND STA.	RESPONSE STA.	DESCRIPTION	REMARKS
			--			
-1 HR 22' 0"						
	101	1	CVTS	MSTC	VERIFY SC PERSONNEL ARE ON CH. 223 FOR EDS TEST.	
	101	2	CVTS	CLTC	SCO PERSONNEL ARE ON CH. 223 TO SUPPORT EDS TEST.	
	101	3	CVTS	LOM	SWITCH TO CH. 223 TO SUPPORT EDS TEST.	
	223	4	CEDK	LOM	VERIFY ABORT REQUEST ENABLE ON.	
	223	5	LOM		ABORT REQUEST A ENABLED AND REQUEST B ENABLED LIGHTS ARE ON.	
					NOTE IN THE FOLLOWING SEQUENCE DO NOT OPERATE BOTH SWITCHES SIMULTANEOUSLY.	
	223	6	CEDK	LOM	ABORT REQUEST A AND ABORT REQUEST B SWITCHES - ON.	
		7		LOM	NOTE THAT REQUEST A TRANSMITTED AND REQUEST B TRANSMITTED LIGHTS GO ON.	
	223	8	SCDR		ABORT LIGHT ON.	
	223	9	CEDK	LOM	ABORT REQUEST A AND ABORT REQUEST B SWITCHES - OFF.	
		10		LOM	NOTE THAT REQUEST A TRANSMITTED, REQUEST B TRANSMITTED, REQUEST A RECEIVED, AND REQUEST B RECEIVED LIGHTS GO OFF.	
	223	11	SCDR		ABORT LIGHT OFF.	

TIME	COMM. CH.	SEQUENCE	COMMAND STA.	RESPONSE STA.	DESCRIPTION	REMARKS
-1 HR 21' 0"						
	181	1	CLTC	CVTS	EDS TEST IS COMPLETE.	
	181	2	MSTC	CVTS	EDS POWER IS OFF.	
	181	3	CVTS	CLTC	EDS POWER IS OFF.	
	181	4	CVTS	LOM	ABORT REQUEST ENABLE SWITCH OFF AND VERIFY.	
		5		LOM	NOTE THAT THE FOLLOWING LIGHTS ON THE ABORT REQUEST PANEL ARE OFF REQUEST A ENABLE AND REQUEST B ENABLED.	
	181	6	CVTS	BWIC	TURN OFF AAS EVENT RECORDERS.	
	181	7	BWIC	CVTS	AAS EVENT RECORDERS ARE OFF.	
-1 HR 8' 0"						
	181	1	CVTS	SRO	VERIFY RADIATION CLEARANCE FOR THE LV LOCAL RANGE SAFETY COMMAND CARRIER FOR DRSCS CLOSED LOOP TEST. PROTECTION IS REQUIRED.	
-1 HR 3' 0"						
	181	1	CLTC	CVTS	VERIFY CLEARANCE TO BRING UP THE LV LOCAL RANGE SAFETY COMMAND CARRIER. (PROTECTION IS REQUIRED.)	
	181	2	CLTC	CVTS	LOCAL RANGE SAFETY COMMAND CARRIER IS COMING ON.	

T MS	COMM. CH.	SEQUENCE	COMMAND STA.	RESPONSE STA.	DESCRIPTION	REMARKS
-56' 0"						
					NOTE	
					LV POWER TRANSFER IS SCHEDULED TO OCCUR AT THIS TIME	
-53' 0"						
	101	1	CLTC	CVTS	HOLD THE CDC AT T-50'0" FOR 5 MINUTES FOR GMT RESET.	
	101	2	CVTS	MSTC SRO CTSC	THE CDC WILL BE STOPPED AT T-50'0" FOR 5 MINUTES FOR GMT RESET.	
-50' 0"						
					STARTING 5 MINUTE SCHEDULED	
					HOLD FOR GMT RESET	
	101	1	CVTS	CLTC MSTC SRO CTSC	THE COUNT IS HOLDING FOR 5'0" FOR GMT RESET.	
	101	2	CLTC	CVTS	LV READY TO RESUME COUNT AT COMPLETION OF HOLD.	
					--JUST PRIOR TO RESUMING COUNT--	
	101	3	CVTS	CLTC MSTC SRO CTSC	THE CDC WILL BE RESTARTED AT T-50' 0" ON MY MARK.	
					5 - 4 - 3 - 2 - 1 - MARK	

TIME	COMM. CH.	SEQUENCE	COMMAND STA.	RESPONSE STA.	DESCRIPTION	REMARKS
-44' 0"						
	181	1	MSTC	CVTS	VERIFY CPSS PERMISSION TO ARM SC PYRO BUSSES (CPSS PERMISSION SIMULATED). EDS POWER IS COMING ON.	
	181	2	CVTS	CLTC	EDS POWER IS COMING ON.	
	181	3	MSTC	CVTS	CSM BUSSES ARE ARMED (PYRO AND LOGIC).	
	181	4	LOM	CVTS	THE ABORT REQUEST PANEL ORDNANCE ARMED LIGHT IS ON AND ORDNANCE SAFE LIGHT IS OFF. **********WARNING********** * * * THE LES IS TO BE ARMED * * BEFORE PROCEEDING WITH * * LV DRSCS TEST. (REF. * * SEQ. 3, T-44' 0"). * * * ********** CLEAR TO PROCEED WITH DRSCS TEST.	
-37' 0"						
	181	1	CLTC	CVTS	DRSCS TEST IS COMPLETE. LOCAL OPEN LOOP IU COMMAND AND LOCAL RANGE SAFETY COMMAND CARRIERS ARE ON (PROTECTION IS REQUIRED). LOCAL CLOSED LOOP IU COMMAND CARRIER IS OFF.	

TIME	COMM. CH.	SEQUENCE	COMMAND STA.	RESPONSE STA.	DESCRIPTION	REMARKS
-37' 0"	CONTINUED					
	181	2	CVTS	SRO	LV LOCAL OPEN LOOP IU COMMAND AND LOCAL RANGE SAFETY COMMAND CARRIERS ARE ON. PROTECTION IS REQUIRED. LV LOCAL CLOSED LOOP IU COMMAND CARRIER IS OFF.	
-35' 0"						
	181	1	CLTC	CVTS	NEW LIFTOFF TIME IS _____ : _____ : _____ GMT. HRS MIN SEC CLOSING OF LAUNCH WINDOW IS _____ : _____ : _____ GMT. HRS MIN SEC	
	181	2	CVTS		READ BACK TIMES TO CLTC FOR CONFIRMATION.	

TIME	COMM. CH.	SEQUENCE	COMMAND STA.	RESPONSE STA.	DESCRIPTION	REMARKS
-35' 0"	CONTINUED					
		3		CVTS	NOTE CALCULATION REQUIRED TO DETERMINE COUNT CLOCK PICKUP TIME AT T-15 MINUTES IS NEW LIFTOFF TIME ____ : ____ : ____ GMT. HRS MIN SEC MINUS 15 MINUTES 15 : 00 MIN SEC CDC PICKUP TIME ____ : ____ : ____ GMT. HRS MIN SEC	
-16' 0"					----CDC LIFTOFF ADJUSTMENT START TIME----	
	181 EM PA	1	CVTS		AT CONCLUSION OF T-15'0" HOLD FOR CDC LIFTOFF ADJUSTMENT THE COUNT WILL BE RESUMED AT ____ : ____ : ____ GMT. HRS MIN SEC	
HOLDING -15' 0"					----STARTING HOLD FOR LIFTOFF ADJUSTMENT----	
	181 EM PA	1	CVTS		THE COUNT IS HOLDING FOR LIFTOFF ADJUSTMENT.	

TIME	COMM. CH.	SEQUENCE	COMMAND STA.	RESPONSE STA.	DESCRIPTION	REMARKS
HOLDING						
-15' 0"	CONTINUED					
					---JUST PRIOR TO RESUMING COUNT---	
	181 CM PA	2	CVTS		THE CDC WILL BE RESTARTED AT T-15' 0" ON MY MARK.	
					5 - 4 - 3 - 2 - 1 - MARK.	
-14'30"						
	261	1	C4TC	CLTC	S-IVB START TANK CHILLDOWN IS IN PROGRESS.	
-9' 58"						
	261	1	C4TC	CLTC	S-IVB TCH CHILLDOWN IS IN PROGRESS.	
-6' 30"						
	261	1	CLTC	CUES	EDS MODE TO LAUNCH.	
	261	2	CLTC	CUNP	INHIBIT SWITCH SELECTOR AND RESET COUNTER.	
-6'. 0"						
	181	1	MSTC	CVTS	SC IS GO.	
	181	2	CVTS	SRO	VERIFY GO FOR TERMINAL COUNT.	
-5' 30"						
	261	1	CLTC	C3NP	FUNCTION SELECTOR TO LAUNCH AND VERIFY ALL STAGES READY FOR POWER TRANSFER ON.	

TIME	COMM. CIL	SEQUENCE	COMMAND STA.	RESPONSE STA.	DESCRIPTION	REMARKS
-5' 0"						
	261	1	CLTC	C3SP	ARM TCS	
-4' 30"						
					********CAUTION******** * * * S-IVB CHILLDOWN MUST BE * * COMPLETE PRIOR TO THE * * NEXT LAUNCH VEHICLE * * SEQUENCE. * * * **********	
	261	1	CLTC	CUSW	LVDA/ESE TO LVDA.	
-4' 0"						
	101	1	CVTS	CLTC	CLEARED FOR LAUNCH.	
	101 261	2	CVTS		NOTE COUNT TIME ANNOUNCEMENTS -3'30" TO -0'40" EVERY 10 SECONDS. -0'40" TO -0'15" EVERY 5 SECONDS. -0'11" TO -0'0" EVERY 1 SECOND.	
-3' 6"						
	261	1	C3FR		VERIFY FIRING COMMAND IS ON (H).	
-0' 0"						
	261	1	C3FR		COMMIT.	

T-0	COMM CH	SEQUENCE	COMMAND STA.	RESPONSE STA.	DESCRIPTION	REMARKS
-3' 0"	CONTINUED					
		2			**********WARNING********** * * * LIFTOFF MUST BE GIVEN * * BY CLVN WITHIN 4 * * SECONDS OF COMMIT. * * * **********	
		3		CLVN	SIMULATED LIFTOFF ENABLE ON (START TIME BASE).	
+0' 0"						TB-1 +0'0"
	261	1	CLTC		LIFTOFF (PANEL LIGHT AND OTV).	
		2		C3FR	NOTE LIFTOFF (C) DEE 2176.	
+2' 0"						
	181	1	CLTC	CVTS	MSS ELEVATOR 2 (WEST) AND PLATFORM 2 ARE RELEASED FOR NORMAL SERVICE.	
	181	2	CVTS	CTSC	RETURN MSS ELEVATOR 2 AND PLATFORM 2 TO NORMAL SERVICE.	
+10' 0"						
	181	1	CVTS	SRO	VERIFY RADIATION CLEARANCE FOR THE LV LOCAL RANGE SAFETY COMMAND CARRIER AND THE LV LOCAL CLOSED LOOP IU COMMAND CARRIER. PROTECTION IS REQUIRED.	
+15' 0"						TB-4 +5' 0"
	181	1	MSTC	CVTS	EDS POWER IS GOING OFF.	

TIME	COMM. CH.	SEQUENCE	COMMAND STA.	RESPONSE STA.	DESCRIPTION	REMARKS
+15' 0"	CONTINUED					TB-4 +5' 0"
	181	2	MSTC	CVTS	PYRO BUSSES ARE SAFE. EDS POWER IS OFF.	
	181	3	CVTS	CLTC	EDS POWER IS OFF.	
	181	4	LOM	CVTS	THE ABORT REQUEST PANEL ORDNANCE SAFE LIGHT IS ON AND THE ORDNANCE ARMED LIGHT IS OFF.	
	181	5	CVTS	BWIC	POWER DOWN AAS POWER BUSSES AND POWER SUPPLIES.	
	181	6	BWIC	CVTS	AAS POWER BUSSES AND POWER SUPPLIES ARE POWERED DOWN.	
		7		LOM	NOTE THAT THE FOLLOWING LIGHTS ON THE ABORT REQUEST PANEL ARE OFF. POWER SUPPLY 1, 2, 3, AAS SUPPLY, AND ORDNANCE SAFE.	
+16'30"						TB-4 +7'30"
	181	1	CLTC	CVTS	VERIFY CLEARANCE FOR LOCAL CLOSED LOOP IU COMMAND AND LOCAL RANGE SAFETY COMMAND CARRIERS. PROTECTION IS REQUIRED.	

TIME	COMM. CH.	SEQUENCE	COMMAND STA.	RESPONSE STA.	DESCRIPTION	REMARKS
+16'30"	CONTINUED					TB-4 +7'30"
					NOTE LV LOCAL CLOSE LOOP IU COMMAND CARRIER WILL BE ON AND LV LOCAL OPEN LOOP IU COMMAND CARRIER WILL BE OFF DURING LV DRSCS TEST. LV LOCAL OPEN LOOP IU COMMAND CARRIER WILL BE ON AND LV LOCAL CLOSED LOOP WILL BE OFF AFTER LV DRSCS TEST. LV DRSCS TEST IS IN THE LV PROCEDURE AT TB-4, T+7'30".	
	181	2	CLTC	CVTS	LOCAL OPEN LOOP IU COMMAND CARRIER IS OFF AND LOCAL CLOSED LOOP IU COMMAND CARRIER IS ON.	
	181	3	CLTC	CVTS	LOCAL CLOSED LOOP IU COMMAND CARRIER IS OFF AND LOCAL OPEN LOOP IU COMMAND CARRIER IS ON.	
	181	4	CVTS	SRO	LV LOCAL CLOSED LOOP IU COMMAND CARRIER IS OFF AND LOCAL OPEN LOOP IU COMMAND CARRIER IS ON.	
+20' 0"						
	181	1	CTSC	CVTS	MSS ELEVATOR 2 RETURNED TO NORMAL SERVICE.	
+1 HR 34' 0"						
	181	1	MSTC	CVTS	PYRO BUSSES WILL BE ARMED.	

TIME	COMM. CH.	SEQUENCE	COMMAND STA.	RESPONSE STA.	DESCRIPTION	REMARKS
+1 HR 42' 0"						
	101	1	MSTC	CVTS	PYRO BUSSES ARE SAFE.	
+1 HR 45' 0"						
	101	1	MSTC	CVTS	CSM BEGINNING SPACECRAFT POWER DOWN.	
+2 HRS 15' 0"						
	101	1	MSTC	CVTS	SPACECRAFT POWER DOWN IS COMPLETE.	
+ 2 HRS 25' 0"						
	101	1	CVTS	SRO	VERIFY RADIATION CLEARANCE FOR THE LV LOCAL CLOSED LOOP IU COMMAND CARRIER. PROTECTION IS NOT REQUIRED.	
+2 HRS 30' 0"						TB-5 +54'54"
	101	1	CLTC	CVTS	VERIFY CLEARANCE FOR LOCAL CLOSED LOOP IU COMMAND CARRIER (PROTECTION IS NOT REQUIRED).	
	101	2	CLTC	CVTS	LOCAL OPEN LOOP IU COMMAND CARRIER IS OFF AND LOCAL CLOSED LOOP IU COMMAND CARRIER IS ON.	

TIME	COMM. CH	SEQUENCE	COMMAND STA.	RESPONSE STA.	DESCRIPTION	REMARKS
+2 HRS 30' 0"	CONTINUED					TB-5 +54'54"
					NOTE LV LOCAL CLOSED LOOP IU COMMAND CARRIER WILL BE ON AND LV LOCAL OPEN LOOP IU COMMAND CARRIER WILL BE OFF DURING LV DRSCS TEST. LV DRSCS TEST IS IN THE LV PROCEDURE AT TB-5, T+54'54".	
	181	3	CLTC	CVTS	DRSCS TEST IS COMPLETE. LOCAL RANGE SAFETY COMMAND CARRIER IS OFF.	
	181	4	CLTC	CVTS	IU COMMAND RECEIVER/DECODER IS OFF AND LOCAL CLOSED LOOP IU COMMAND CARRIER IS DISABLED.	
	181	5	CVTS	SRO	LV LOCAL RANGE SAFETY COMMAND CARRIER IS OFF. LV LOCAL CLOSED LOOP IU COMMAND CARRIER IS OFF. LV LOCAL OPEN LOOP IU COMMAND CARRIER IS OFF.	
	181	6	CLTC	CVTS	LV RF AND TM CLEARANCE IS NO LONGER REQUIRED.	
	181	7	CVTS	SRO	ALL LV RF AND TM SYSTEMS ARE OFF. SV OAT PLUGS IN TEST IS COMPLETE.	
	181	8	CVTS	CTSC	SV OAT PLUGS IN TEST IS COMPLETE.	
					END OF OPERATING STEPS	

LA-PLN-1 DISTRIBUTION FOR TCP SV-41400 SL-3
OAT #1 (PLUGS IN)

1	DD-EDD	White	2	AFETR, DOOP	
2	IN-HSD-12	Stevens	1	AFETR, DOOT	
3	IN-OIS-1	Parrish	2	AFETR, PAPP MU595	
25	IN-OMO	Coonce	2	AFETR, PAPO, MU5420	Walker
1	IS-PEM	Daley	10	MSC/FC-7	Glines
1	IS-PEM-B	Jansen	1	MSFC/HO-E	Kimery
1	IS-PEM-1	Gray	3	MSFC/HO-OL	Ladner
1	IS-PEM-2	Cullen	1	MSFC/SAT-A	Moody
1	IS-PEM-4	Jamieson	1	MSFC/SAT-A	Repository
1	IS-PEM-22	Werden	1	OMSF/MAO	Holcomb
3	IS-SHC	Horner	2	BEN-2100 LCC 1R18	Ames
1	IS-TSM	Brown	3	BEN-2320 VAB 1B6	Pope
1	LA-PLN	Moser	3	BEN-2350, HQ 1503	Compton
6	LCC 4R8	Schick	1	BEN-4120, HQ 2549	Reed
1	LS-OPN	Page	2	BOFL-73, O&C 2116	Larson
1	LS-OPN-1	Chauvin	1	BOFL-73, O&C 2116	Weinberg
1	LS-OPN-3	Proffitt	5	BOFM-36, VAB 2L4	Melton
1	LV-GDC	Lealman	2	BOFM-39, VAB 2L10	Scholz
2	LV-INS-1	Huffman	1	BOFO-31, O&C 3121	Kramp
1	LV-OMO-1	Slogar	1	BOFS-00, K6-1045	Ballard
2	LV-OMO-3	Youmans	2	BOFT-00, VAB 7E14	Maxwell
1	LV-PLN	Nagle	3	CHRY-16, VAB 15B7	O'Dell
1	SF-OPN	Woods	1	FEC-200, MC-336, 123	Stein
1	SO	Gorman	1	FEC-300, CIF 310	Dell
1	SO-OPN-1	Pyles	1	FEC-810, M6-339	Boessow
1	TS	Hinderman	1	FEC-820, M6-339, 202	Tveter
2	TS-NTS-1	Huber	1	FEC-870, M6-138, 117	Deeter
1	TS-OSM	Gramling	1	GE-AS, O&C 3018	Fowler
2	TS-OSM	Smith	3	IBM-G10, VAB 2N5	Witt
2	CEK-2A	Messimer	1	NR, ZK-20, O&C 3079	Nurnberg
1	DDK-4	Elliott	1	NR, ZK-49, O&C 3088	Cloyd
1	GUSB	Jenkins	2	NWSL-D	Library
3	KM	Williams	10*	LA-PLN-1	GRIFFIN
5	PSK	Morse			
3	AFETR, DONO				

150 TOTAL

* ORIGINAL AND EXTRA COPIES TO A. G. GRIFFIN, JR, LA-PLN-1

Changes to this Distribution list shall be made by sending an AVO with justification to LA-PLN-1, ATTENTION: R. B. Battin.

6/05/73/1