Complex Activation Exercises

TITLE: COMPLEX ACTIVATION EXERCISES AND DEMONSTRATIONS

RESPONSIBILITY:

A. The Martin Company (as integrator)

B. Associate Contractor Support

ACTIVATION EXERCISES AND ACTIVITIES DEMONSTRATIONS:

The activation exercise is the series of tests and demonstrations following the Associate Contractor subsystem tests and Integrated System Marriage Tests that are performed on an integrated basis with the objectives of: (1) Demonstrating the capabilities of the integrated weapon system to perform in accordance with the applicable specifications and/or contract requirements; and (2) to demonstrate that these activities can be performed by use of the technical manuals prepared for the Air Force but not to include the verification of tech orders prior to turn-key. The activation exercise is made up of the increments outlined below. Activities not covered by checklists and/or T.O. manuals will be covered by special procedures written by headquarters SMD.

The Activation Exercises are designed to fulfill the requirements of AFBM Exhibit 60-5 (Revision A) Functional Demonstration Specification and SR-59-102, Integrated Weapon System Activation Plan.

ACTIVATION EXERCISE SUMMARY

INCREMENT 1

TITLE: LAUNCH COMPLEX PRE-INSTALLATION INSPECTION

RESPONSIBILITY:

A. The Martin Company - Test Conductor

B. Associate Contractor Support

DOCUMENT REQUIREMENTS.

A. M-1-765-CL-2-2 Launch Complex Pre-Installation Check List Deck

B. M-1-766-SC-2-2 Launch Complex Pre-Installation Sequence Chart

C. AP-XXX-2 Administrative Procedure

LOCATION:

A. Missile Silos

B. Equipment Terminals

C. Propellant Terminals

D. Power House

E. Control Center

F. Antenna Terminals

OBJECTIVE:

The objective of this Activation Exercise is to demonstrate the capability to accomplish all complex inspections and preparations prior to missile installation in accordance with Sequence Chart M-1-766-SC-2-2 and Check List M-1-765-CL-2-2.

DESCRIPTION:

This Exercise shall verify that the GN_2, LN_2, LOX, He and RP-1 gas and fluid storage facilities are all at proper level or pressure in accordance with T.O. 21-SM68-2J-12-3; verify that the process water storage and CO_2 systems are properly loaded; verify that the facility air conditioning system is operating properly; verify that the facility compressed air systems are operating properly; and verify that the facilities electrical power production and distribution system is operating properly.

REFERENCE DOCUMENTS:

A. AFBM Exhibit 59-11 Rev. A

B. AFBM Exhibit 60-5

C. WDD-M-SR-59-102

D. T.O.'s as specified in applicable Checklist Deck and Administrative Procedure

PREREQUISITES:

All sub-systems and facilities support equipment have been previously tested and accepted in accordance with the Integrated Sub-System Test Plan and Procedure WDD-M-SR-101.

SUPPORT:

A. Stand-by support of Stromberg Carlson is required in order to maintain complete communication service throughout the complex.

B. Tools: None

C. Facilities: Readiness power shall be available throughout the Facility at all times.

RECOMMENDED MANPOWER:

1 Engineer

15 Technicians

SPECIAL REQUIREMENTS:

The Launch Complex Pre-Installation Exercise shall be conducted on every launcher prior to each missile installations.

ACTIVATION EXERCISE SUMMARY

INCREMENT 2

TITLE: MISSILE UNLOAD AND CONVOY

RESPONSIBILITY:

A. The Martin Company - Test Conductor

B. Associate Contractor Support

DOCUMENT REQUIREMENTS:

M-1-765-CL-3-2, Missile Unload and Convoy Checklist Deck

AP-XXX-2, Administrative Procedure

COMPONENTS:

SM-68 Missile, Trailers and Towing Vehicles

LOCATION:

Airstrip to MAMS

OBJECTIVE:

The objective of this Activation Exercise is to demonstrate the capability to accomplish the missile unload and convoy. This exercise is not applicable at Site T-1.

DESCRIPTION:

This exercise consists of preparing the aircraft for removal of the missile, inspection of the missile and trailer prior to unloading, preparing Stage I for removal, towing Stage I from the aircraft, attaching the towing vehicle, removing and towing Stage II from the aircraft and towing each stage to the MAMS.

REFERENCE DOCUMENTS:

A. AFBM Exhibit 59-11 Rev. A

B. AFBM Exhibit 60-5

C. T.O.'s as specified in the Checklist Deck and Administrative Procedure

PREREQUITIES:

MAMS installation complete and available for receiving missile.

SUPPORT:

As defined in applicable T.O.'s

RECOMMENDED MANPOWER:

1 Test Conductor

4 Technicians

ACTIVATION EXERCISE SUMMARY

INCREMENT 3

TITLE: MISSILE CONVOY AND INSTALLATION

RESPONSIBILITY:

A. The Martin Company - Test Conductor

B. American Machine and Foundry - Operate launcher from ground level portable control station, position work platforms, operate missile handling equipment.

C. Stromberg/Carlson - Stand-by support to maintain adequate communications service.

DOCUMENT REQUIREMENTS:

M-1-765-CL-9-2 - Missile Convoy and Installation Checklist Deck

M-1-766-SC-9-2 - Missile Convoy and Installation Sequence Chart

T.O. 21-SM68-2J-2-1 - Missile Handling Job Procedures

AP-XXX-3 - Administrative Procedure

COMPONENTS:

Guided Missile Trailer A/M-32U (XC-1)

Guided Missile Trailer A/M-32U-4(XC-1)

SM-68 Missile

Launcher

OBJECTIVE:

The objective of this Activation Exercise is to demonstrate the capability to accomplish missile convoy to the silo and installation operations at the silo in accordance with Checklist M-1-765-CL-9-2.

DESCRIPTION:

This exercise consists of convoying the missile to the launch complex, emplacement of the missile handling equipment, preparing the missile for installation, preparing the silo and launcher to receive the missile, installing Stage I, reposition launcher, installing Stage II and reposition the Launcher in preparation for receiving the Re-Entry Vehicle.

REFERENCE DOCUMENTS:

AFBM Exhibit 59-11 Rev. A

AFBM Exhibit 60-5

SR-59-102, Test Plan 3.3.2

T.O.'s as specified in the Checklist Deck and Administrative Procedure

PREREQUISITES:

Launch Complex Pre-Installation complete for the applicable launcher being exercised.

SUPPORT:

Tools and facility support as defined in administrative procedure and T.O.'s

RECOMMENDED MANPOWER:

1 Engineer

15 Technicians

ACTIVATION EXERCISE SUMMARY

INCREMENT 4

TITLE: RE-ENTRY VEHICLE CONVOY AND INSTALLATION

RESPONSIBILITY:

A. The Martin Company - Test Conductor

B. American Machine and Foundry - Operate launcher from ground level portable control station, operate the re-entry vehicle handling equipment; position work platforms.

C. Stromberg/Carlson - Stand-by support to maintain adequate communications service.

D. AVCO - Technical assistance during Re-entry Vehicle operations:

DOCUMENT REQUIREMENTS:

M-1-765-CL-10-2 - Re-entry Vehicle Convoy and Installation Checklist Deck

M-1-766-SC-10-2 - Re-entry Vehicle Convoy and Installation Sequence Chart

T.O. 21-SM68-2J-5-1 - Re-entry Vehicle System Job Manual

T.O. 21-SM68-2J-5-3 - Re-entry Vehicle System Checkout and Trouble Analysis, Launch Site, Job Manual

AP-XXX-4 - Administrative Procedure

COMPONENTS:

Re-entry Vehicle Trailer

Re-entry Vehicle (Dummy)

OBJECTIVE:

The objective of this Activation Exercise is to demonstrate the capability to accomplish Re-entry Vehicle convoy to the silo and installation operations at the silo in accordance with Checklist M-1-765-CL-10-2.

DESCRIPTION:

This exercise consists of convoying the Re-Entry Vehicle to the launch complex, emplacement of the Re-Entry Vehicle handling equipment, preparing the Re-Entry Vehicle for installation, preparing the silo and launcher for Re-Entry vehicle installation and installing the Re-entry Vehicle. With the Re-entry Vehicle installed, the Missile will be raised to the "up" position and alignment checked by use of the theodolites.

REFERENCE DOCUMENTS:

AFBM Exhibit 59-11 Rev. A

AFBM Exhibit 60-5

SR-59-102, Test Plan 3.3.2

T.O.'s as specified in the Checklist Deck and Administrative Procedure

PREREQUISITES:

Successful completion of missile installation

SUPPORT:

Tools and facility equipment as defined in referenced documents.

RECOMMENDED MANPOWER:

1 Engineer

15 Technicians

SPECIAL REQUIREMENTS:

With launcher up and locked, the missile alignment must be $\pm \frac{1}{4}$ degree from true vertical of the theoretical center line in pitch and yaw.

ACTIVATION EXERCISE SUMMARY

INCREMENT 5

TITLE: POST MISSILE INSTALLATION

RESPONSIBILITY:

A. The Martin Company - Test Conductor

B. Aerojet General Corporation - Technical assistance required during engine degreasing and all engine preparations

C. AVCO - Monitor of Re-entry Vehicle operations

D. Stromberg/Carlson - Stand-by support to maintain adequate communications service

E. American Machine and Foundry - Technical Assistance during final launcher preparations

DOCUMENT REQUIREMENTS:

M-1-765-CL-112 - Post Installation Checklist Deck

M-1-765-SC-11-2 - Post Installation Sequence Chart

AP-XXX-5 - Administrative Procedure

COMPONENTS: LOCATION:

Missile and Missile Services — Missile Silo

OBJECTIVE:

The objective of this Activation Exercise is to demonstrate the capability to perform the post missile installation activities as specified in Checklist M-1-765-CL-11-2.

DESCRIPTION:

This exercise consists of extending the work platforms, removing missile access panels, unpackaging of Stage I engine and Stage II exterior, and inspection of the engines, R/V, propellant tanks, missile compartments, TCPS and TCVS settings. Leak checks are performed on the Gas Generator assemblies, PC6 Hot Gas lines, the propellant systems, spin detector, auxiliary turbopump oxidizer system, missile guidance set, gyro assembly, magnetic amplifier, engine oxidizer system, and the Stage II hot gas systems.

DESCRIPTION: (Continued)

Umbilicals are connected and installation performed on the APS interstage connectors, tie down gear, APS battery, HPS battery, vernier nozzles, air scoops, ablative skirt, guidance set antenna test hoods, Stage I thrust chamber igniters and igniter shields. Torque check and lubrication of engine assemblies, visual checkout of the guidance system and hydraulic system filling and bleeding operations are performed.

REFERENCE DRAWINGS:

AFBM Exhibit 59-11 Rev. A

AFBM Exhibit 60-5

SR-59-102, Test Plan 3.3.3

T.O.'s as specified in the Checklist Deck and Administrative Procedure

PREREQUISITES:

Successful completion of the missile and re-entry vehicle installation in the silo.

SUPPORT:

Tools and equipment as defined in the referenced documents.

RECOMMENDED MANPOWER:

1 Engineer

21 Technicians

SPECIAL REQUIREMENTS:

This activity shall be performed at every launcher after each missile installation.

ACTIVATION EXERCISE SUMMARY

INCREMENT 6

TITLE: WEAPON SYSTEM CHECKOUT

RESPONSIBILITY:

A. The Martin Company - Test Conductor

B. BTL/WECO - Technical assistance during Ground Guidance Station Checkout

C. Stromberg/Carlson - Communications

D. AVCO - Technical assistance during Re-entry Vehicle Checkout

E. AMF - Technical assistance during Launch Checkout

F. AGC - Technical assistance during Engine Checkout

DOCUMENT REQUIREMENTS:

M-1-765 CL-12-2 - Weapon System Checkout Checklist Deck

M-1-766-SC-12-2 - Weapons System Checkout Sequence Chart

AP-XXX-6 - Administrative Procedure

SP-XXX-6 Special Procedure

COMPONENTS AND LOCATION:

Complex facilities

Complete launcher assembly

Control center GOE for launcher under test.

OBJECTIVE:

The objective of this Activation Exercise is to demonstrate the capability of the Ground Operating Equipment to Checkout each sub-system within the complex and verify that the Weapons System is in a Launch Readiness condition in accordance with Check List M-1-765-CL-12-2.

DESCRIPTION:

This exercise consists of missile and GOE subsystem checkout, turning on checkout power applying power to the missile, interconnecting cable checkouts, adjustment of the density compensator valves, checkout of fuel system, loading of missile with fuel, engine inspections, checkout of LOX quantity controller, installation of gas generator igniter, installation of thrust chamber igniters and connection of igniter harness, removal of engine gimbal actuator lock-ups, retraction of all work platforms and preparations for weapon system exercising.

DESCRIPTION: (Continued)

The portions of the checklist pertaining to Weapon System Exercising and follow up inspections shall not be performed during this increment of the Activation Exercise. This portion which includes LOX loading and unloading will be performed after the Dry Run Exercises. The following system checkouts will be performed during the activity:

a. Electrical System Readiness Checkout
b. Checkout Electrical System
c. Checkout of Missile Air Conditioning System
d. Fuel System Checkout
e. Guided Missile Test Set Checkout
f. Control Center Power Supply Checkout
g. Checkout of Control Center and Target Circuits
h. Launch Sequencer Checkout
i. Electrical Checkout of Missile Guidance Set (AN/DRW-18)
j. Checkout of Rocket Engine System
k. Flight Control System Checkout
l. Launch Control Console Checkout
m. Launch Complex Facilities Console Checkout
n. Target Selection Circuit Checkout
o. Time Display Board Checkout
p. R/V GOE Self Test
q. Missile Flight Circuits Checkout
r. R/V System Checkout

REFERENCE DOCUMENTS:

AFBM Exhibit 59-11 Rev. A
AFBM Exhibit 60-5
SR-59-102, Test Plan 3.3.3
T.O.'s as specified in the Checklist Deck and Administrative Procedure

PREREQUISITES:

Successful completion of Post Installation activities specified in Checklist M-1-765-CL-12-2.

SUPPORT:

Tools and facility equipment as defined in the test documents.

RECOMMENDED MANPOWER:

1 Engineer

15 Technicians

SPECIAL REQUIREMENTS:

The Weapons System Checkout shall be conducted on every launcher after each missile installation and after every Launch Exercise and/or Launch Mode Exercising of the Weapons System.

ACTIVATION EXERCISE SUMMARY

INCREMENT 7

TITLE: UNLOAD FUEL

RESPONSIBILITY:

A. The Martin Company - Test Conductor

B. Associate Contractor support from AMF and S/C

DOCUMENT REQUIREMENTS:

T.O. 21-SM68-2J-12-1

AP-XXX-7

SP-XXX-7

COMPONENTS:	LOCATION:
Missile	Missile Silo
Fuel System	Missile Silo and Fuel Storage Area
Fuel Transfer Panel	Propellant Terminal

OBJECTIVE:

The objective of this Activation Exercise is to complete the demonstration of the Fuel Loading - Unloading sequence initiated under Weapon System Checkout and to unload fuel from the missile in preparation for the Dry Run Activity.

DESCRIPTION:

This exercise will be performed in the Manual Checkout Mode. Unloading will be initiated by depressing the unload Stage II pushbutton on the fuel launch and checkout assembly. At the completion of Stage II unloadings, depress the Stage I unload pushbutton on the fuel launch and checkout assembly. The unloading operations shall be conducted in accordance with the Technical Manuals.

REFERENCE DOCUMENTS:

AFBM Exhibit 59-11

AFBM Exhibit 60-5

SR-59-102, Test Plan 3.3.11

PREREQUISITES:

Successful completion of the Weapon System Checkout exercise including the fuel loading activity.

SUPPORT:

Tools and facility equipment as specified in the test documents.

RECOMMENDED MANPOWER:

1 Engineer

4 Technicians

SPECIAL REQUIREMENTS:

This activity shall be performed at each launcher prior to the Dry Run activity.

ACTIVATION EXERCISE SUMMARY

INCREMENT 8

TITLE: ORDNANCE INSTALLATION

RESPONSIBILITY:

A. The Martin Company - Test Conductor

B. American Machine and Foundry (tower and release bolts installation)

DOCUMENT REQUIREMENTS:

M-1-765-13-2 - Ordnance Installation Checklist Deck

M-1-766-SC-13-2 - Ordnance Installation Sequence Chart

AP-XXX-8 - Administrative Procedure

COMPONENTS:

Missile

Ordnance Items

LOCATION:

Missile Silo

OBJECTIVE:

The objective of this Activation Exercise is to demonstrate the capability for ordnance installation in accordance with the applicable T.O. without deleterious effect on the missile or facility.

DESCRIPTION:

This exercise shall be performed separately for each missile and shall include the installation of the following items:

Stage Separation Nut Pressure Squibs

Missile Release Explosive Bolts

Tower Tilting Mechanism Explosive Bolts

Staging Rocket Release Squibs

Staging Rockets

REFERENCE DOCUMENTS:

AFBM Exhibit 59-11, Rev. A

AFBM Exhibit 60-5

SR-59-102

PREREQUISITES:

Prior checkouts must have been performed to verify that no stray voltages exist that would result in accidental firing of the ordnance items.

Safety requirements as specified in the T.O. shall be followed.

SUPPORT:

RECOMMENDED MANPOWER:

1 Engineer

11 Technicians

SPECIAL REQUIREMENTS:

The Ordnance Installation activity shall be performed on each Missile.

ACTIVATION EXERCISE SUMMARY

INCREMENT 9

TITLE: LAUNCH READINESS MONITORING

RESPONSIBILITY:

A. The Martin Company - Test Conductor

B. AVCO - R/V system readiness checkout

DOCUMENT REQUIREMENTS:

M-1-765-CL-14-2 - Launch Readiness Monitoring Checklist Deck

M-1-766-SC-14-2 - Launch Readiness Monitoring Sequence Chart

AP-XXX-9 - Administrative Procedure

COMPONENTS:

Missile and GOE

LOCATION:

Missile Silo, Equipment Terminal, Antenna Terminal, and Control Center

OBJECTIVE:

The objective of this Activation Exercise is to demonstrate the capability to perform system Readiness Monitoring Procedures in accordance with the Checklist T.O.

DESCRIPTION:

This exercise shall be performed by cycling every sub-system and system through a checkout mode. Each system will be returned to the Launch Readiness Mode after a "GO" status has been achieved. The Launch Readiness condition requires a "GO" status for each system at the Launch Complex Facility Console.

REFERENCE DOCUMENTS:

AFBM Exhibit 59-11, Rev. A

AFBM Exhibit 60-5

SR-59-102, Test Plan 3.3.10

T.O.'s as specified in the Checklist Deck and Administrative Procedure

PREREQUISITES:

Completion of tests as defined in WDD-M-SR-59-101 and Activation Exercises Increments 1, 2, 3, 4, 5, 6, 7 and 8.

SUPPORT:

RECOMMENDED MANPOWER:

1 Engineer

2 Technicians

SPECIAL REQUIREMENTS:

This activity shall be conducted for each launcher prior to the Dry Run Activity. This activity (including a 24-hour readiness hold demonstration) shall be repeated on a complex basis after the Wet Exercise and prior to any Weapon System Exercise.

ACTIVATION EXERCISE SUMMARY

INCREMENT 10

TITLE: DRY RUN ACTIVITIES

RESPONSIBILITY:

A. The Martin Company - Test Conductor

B. Technical support from all Associate Contractors

DOCUMENT REQUIREMENTS:

AP-XXX-10 - Administrative Procedure

SP-XXX-10 - Special Procedure

COMPONENTS:

GOE, PLS, and Launcher Equipment

LOCATION:

Propellant Terminal, Equipment Terminal, Missile Silo, and Control Center

OBJECTIVE:

The objective of this Activation Exercise is to "marry" GOE systems to each other, to the facility equipment and to the missile.

DESCRIPTION:

The Dry Runs will be conducted in both the Exercise Mode and the Launch Mode and will conform to a normal launch countdown except that propellants will not be loaded. A test tool will be used to simulate the necessary signals to enable a normal countdown without flowing propellants.

The following tests will be conducted to demonstrate the capability of the GOE to perform shutdowns at various times:

1. Test tool installation
2. Shutdown at T-281 - Exercise Mode
3. Shutdown between T-280 and T-41 - Exercise Mode
4. Shutdown between T-40 and T-1 - Exercise Mode
5. Shutdown after T-1 (Check Lift Off) - Launch Mode
6. Shutdown after T-1 - Launch Mode
7. Test tool removal

REFERENCE DOCUMENTS:

SR-59-102 - Test Plans 3.3.4, 3.3.5, 3.3.6, 3.3.7, 3.3.8, 3.3.9

T.O.'s as specified in the Administrative Procedures and Special Procedure.

PREREQUISITES:

Successful completion of the Launch Readiness Monitoring Activity, Increment 9

SUPPORT:

Tools

A test tool to simulate certain function of the missile, facility, and PLS is required to enable a launch countdown to progress without the normal flow of propellants.

Facilities

Sufficient power shall be available throughout the complex to support a launch countdown.

RECOMMENDED MANPOWER:

2 Electrical Engineers
1 Electronic Engineer
2 Mechanical Engineers
3 Electrical Technicians
2 Electronic Technicians
3 Mechanical Technicians

SPECIAL REQUIREMENTS:

The Dry Run Exercises shall be performed at each launcher.

ACTIVATION EXERCISE SUMMARY

INCREMENT 10.1

TITLE: TEST TOOL INSTALLATION

OBJECTIVE:

The purpose of this activity is to install the dry run test tool in accordance with Special Procedure SP-XXX-10.

DESCRIPTION:

A. Install portable desiccant-breather units on all propellant tanks to provide pressure equalization when missile is elevated.

B. Install test tool(s) to simulate the following functions:

1. ECS closures (1) TCVS-3, and (2) TCVS-3.
2. ECS closures (1) GGVS, (2) GGVS, (1) TCPS and (2) TCPS
3. TARS Programmer Initiation
4. Prerequisites to "Lox Loaded"
   a. Stage I/II Lox Tanks
   b. Stage I/II Helium Tanks and Accumulators
5. "Stage I/II Missile Fuel Storage Valves Open"
6. Prerequisites to "Missile Tanks Pressurized"
   a. Stage I/II Lox Tanks
   b. Stage I/II Fuel Tanks
   c. Stage I/II Helium Tanks and Accumulators
7. Simulate FCV 607 and FCV 608 open
8. Simulate LOX Storage Tank Pressure
   a. Set Point 1
   b. Set Point 2
9. Simulate Facility Liquid Sensors
10. Install Stray Voltage (No-Fire) Detectors in Place of Missile Holddown and Tower Retract Bolts
11. "Lift-Off"

DESCRIPTION: (Continued)

C. Install simulators for the following ordnance items:

1. Separation rocket igniters
2. Staging bolts
3. Separation rocket eject
4. Stage I and II thrust chamber igniters
5. Stage I gas generator igniters

D. Install A/B batteries

E. Verify that there is no pressure in the nitrogen start system.

F. Disconnect and jumper wires to the missile fuel storage valves. Record receipt of signal over loop thus formed.

G. Insure that the water spray system main supply valve remains closed.

H. Insure that the Ground Guidance Station is prepared for the tool installation in the following respects:

1. Initiation of guidance programmer at "Loop Check Complete."
2. Manual operation of the "Guidance in Progress" switch, to be accomplished at the time of "Check Lift-Off."

I. Insure that system lines remain "Dry" throughout the dry run exercise by performing the following steps:

1. Prevent N_2 pressurization of lox storage tank T-201
2. Isolate helium storage tank T-601A and T-601B
3. Prevent N_2 pressurization of helium lines. Enable N_2 blanket pressurization of missile fuel, lox and helium tanks.

K. To prevent lox flow through system lines and to the missile, remove wires from the bus bar in the ADL LOX transfer panel to disable the following valves:

1. FCV218; (main lox supply)
2. FCV302; (lox storage tank vent)

L. Verify that all GOE operating mode switches are in the "Launch"position.

DESCRIPTION: (Continued)

M. Verify that the Launch Sequencer is generating a "Missile/Facility Go" for transmission to the Control Center Circuits. This signal is contingent on receipt of "Go" signals from the following GOE subsystems:

1. Accessory Supply System;
2. Engine Control System;
3. Flight Control System;
4. Launcher Control System;
5. Propellant Loading and Pressurization System;
6. RIME Checkout Set;
7. Re-entry Vehicle System.

N. Verify that the Control Center Circuits are generating a "Control Center Go" for the launcher upon which the exercise is to be performed. In addition to the "Missile/Facility Go" signal from the Launch Sequencer, this signal is contingent upon "Go" signals from the following:

1. "Target Go" from the Targeting Control System;
2. "GGS Go" from the Ground Guidance Station (in standby)

O. Verify by visual inspection the status of the launcher as follows: (These functions contribute to the "LCS Go" which in turn contributes to the "Missile/Facility Go.")

1. Launcher fully lowered;
2. Shelter doors closed;
3. Hydraulic system at standby pressure;
4. Work platforms retracted;
5. Stage I Lox fill line (1E1L) umbilical support extended;
6. Stage II Lox fill line (3B1L) umbilical support extended;
7. Stage I Lox vent duct (1C1LV) umbilical support extended;
8. Stage II Lox vent duct No. 1 (2B1LV) umbilical support extended;
9. Stage II Lox vent duct No. 2 (2BLV) umbilical support extended;
10. Lower umbilical support mechanism erect;
11. Umbilical tower positioned, latch reset;

DESCRIPTION: (Continued)

12. Voltage on electrical system;
13. Hydraulic reservoir at operating level;
14. Crib locks retracted;
15. Counterweight support and cable slacked off;
16. Water spray system main supply valve closed;
17. Hydraulic system return line pressure normal;
18. Power pack start, not initiated;
19. Engine compartment spray valve open;
20. Flame deflector spray valve open.

P. Verify that the following green light indication conditions on the Accessory Supply System are present:

1. Missile Stage I hydraulic accumulator pre-charge pressure is above 1750 psig;
2. Missile Stage II hydraulic accumulator pre-charge pressure is above 1750 psig;
3. The Standby Battery Unit is capable of supplying standby power as required;
4. The missile inverter battery pneumatic activation charge is within limits. (The battery has not been activated);
5. The missile hydraulic battery pneumatic activation charge is within limits. (The battery has not been activated);
6. The Air Conditioning Unit is capable of being properly controlled by the A.S.S.;
7. The 400 cps Motor Generator Unit is capable of supplying 400 cps power as required;
8. The Ground Hydraulic Unit is capable of supplying hydraulic power as required;
9. The inverter Start Unit is capable of supplying power to the missile as required;
10. The 28VDC power supply is capable of supplying power as required.

DESCRIPTION: (Continued)

Q. Verify absence of the following warning indications in the RVS GOE (for this check only the RVS GOE mode selector switch must be placed in the "Checkout" mode):

	Mk 3	Mk 4
1.	W/H Pressure	W/H Pressure
2.	Ground Test	A&F Continuity

R. Disconnect the gimbal actuators at the thrust chambers of the Stage I and Stage II engines. Tie down actuators so that extension and retraction can occur without restriction and without damaging any other components.

ACTIVATION EXERCISE SUMMARY

INCREMENT 10.2

TITLE: DRY RUN - EXERCISE MODE - SHUTDOWNS AT T-281

OBJECTIVE:

The purpose of this activity is to verify that the countdown can progress without unscheduled "holds" or "shutdown" to T-281 and that a safe manual shutdown of the weapon system can be initiated at T-281.

DESCRIPTION:

This test will be conducted as a Weapon System countdown (Exercise Mode) per WDD-M-SR-59-46 with the exceptions that the following special conditions shall also apply;

1. Propellants and pressurization gases will not be loaded.
2. An FCS No-Go shall be introduced prior to T-281, the count shall continue to T-281, at which time a shutdown shall occur.
3. Certain sequence signals and other functions will be simulated by test tool(s).

ACTIVATION EXERCISE SUMMARY

INCREMENT 10.3

TITLE: DRY RUN - EXERCISE MODE - SHUTDOWN BETWEEN T-280 and T-41

OBJECTIVE:

The purpose of this activity is to verify that the countdown can progress past T-280 without unscheduled "holds" or "shutdowns" and that a shutdown will be automatically occured due to a manually introduced GOE "No-Go".

DESCRIPTION:

This test will be conducted as a Weapon System countdown (Exercise Mode) per WDD-M-SR-59-46, with the exceptions that the following special conditions shall also apply:

1. Propellants and pressurization gases will not be loaded.
2. An LCS No-Go shall be introduced prior to T-41 and after T-280 at which time an automatic shutdown shall occur.
3. Certain sequence signals and other functions will be simulated by test tool(s).