STEP	PROCEDURE
13 (CONT)	d. Verify supply valves open. e. Set HAND-OFF-AUTO switch to AUTO. f. Set utility air compressor HAND-OFF-AUTO switch to OFF and repeat steps b through e. g. Verify air drier power switch on unit not in service (if applicable) is ON. h. Verify auxiliary diesel engine fuel tank level and auxiliary diesel engine sump lube oil level are normal.
14	Ventilation system inspection: SAC CEM 21-SM68-2-20-( ) a. Verify air intake supply fan(s) operating properly and insure static air pressure is properly maintained. b. Verify exhaust fan(s) operating properly.
15	Domestic water system inspection: SAC CEM 21-SM68-2-24-( ) a. Verify domestic water pumps are operational and pressure is normal. b. Verify water level and air pressure on hydropneumatic tank are normal.
16	Ice bank inspection: a. Verify all ice bank control switches are properly positioned. b. Verify water level in ice banks is normal. c. Verify ice thickness in ice banks is normal.
17	Fire water system inspection: a. Verify jockey water pump is operating and pressure is normal. b. Verify raw water tanks levels are normal. c. (EAFB) Verify FCV 805-1, 805-2, and 805-3 indicators are lighted green. d. (BAFB, LAFB, MHAFB) Verify FCV 805-1, 805-2, and 805-3 indicators are lighted red.

Figure 3-14. Electrical Power Production Technician Alert Status Monitoring Procedure (EAFB, BAFB, LAFB, MHAFB) (Sheet 6 of 8)

STEP	PROCEDURE
17 (CONT)	e. (EAFB) Verify XFV 802-1, 802-2, and 802-3 indicators are lighted green. f. (BAFB, LAFB, MHAFB) Verify XFV 802-1, 802-2, and 802-3 indicators are lighted red. g. Verify fire water pumps (P3094 and P3095) control switches are properly positioned. h. Set LEAD-LAG switch to opposite position.
18	Raw water system inspection: a. Verify one raw water pump is operating and other raw water pump is in standby.
19	Cooling tower system inspection: a. Verify one cooling tower water pump is operating and other cooling tower water pump is in standby.
20	Standby diesel engine pre-lube and blow out (when required): a. Press pre-circulating lube oil pump START pushbutton. b. Set generator LOAD LIMIT knob to MIN FUEL. c. Verify indicator valves (8) are open. Note Engage engine barring gear and rotate engine two revolutions; then secure barring gear. CAUTION Check for oil indication in turbocharger sight glass before blowing out engine.

Figure 3-14. Electrical Power Production Technician Alert Status Monitoring Procedure (EAFB, BAFB, LAFB, MHAFB) (Sheet 7 of 8)

STEP	PROCEDURE
20 (CONT)	d. Intermittently press auxiliary START pushbutton, located under engine governor, until engine has completed two revolutions. e. Close indicator valves (8). f. Set governor LOAD LIMIT knob to MAX FUEL.
21	Diesel fuel storage tanks servicing (if applicable): a. Check level of storage tank by using a sounding tape. CAUTION Do not attempt to service any tank when it has been determined, by sounding, that it will not hold the capacity of the servicing tanker without overflowing. b. Connect fill source to surface receptacle. c. Open fill valve on tank to be serviced. WARNING Do not sound tank during servicing process. d. Start filling from fill source. CAUTION One man will remain near tank being serviced. If any abnormal condition arises such as leakage, overflow, or a line break, shut off fill valve at tank and direct closure of valve at fill source. e. Shut off flow of fuel at fill source. f. Close fill valve on tank that has been serviced. g. Check level of tank after filling is complete by using a sounding tape. h. Record tank level.

Figure 3-14. Electrical Power Production Technician Alert Status Monitoring Procedure (EAFB, BAFB, LAFB, MHAFB) (Sheet 8 of 8)

STEP	PROCEDURE
	MECHANICAL EQUIPMENT ROOM
1	Air compressor (CC 5010)
	Supply tank pressure (PI 5064). . . . . Green
	Control pressure (PI 5063). . . . . Green
	Oil level . . . . . Checked
	Drain tank. . . . . Accomplished
	SAC CEM 21-SM68-2-20-( )
	This air compressor located in work area 6J, furnishes supply pressure to pneumatic temperature, humidity and pressure controllers for air conditioning equipment, and pneumatic flow control valves in the control center and fuel storage area.
2	AC2032 thermometer (TI 2207). . . . . Green
	AC2032, located in work area 6J, supplies cool air to all guidance and computer cabinets in the upper level of the control center.
	ELECTRICAL EQUIPMENT ROOM
3	Battery charger (REC 1010)
	GROUND indicating lights. . . . . Same Intensity
	VOLTS . . . . . Green
	AMMETER . . . . . Green
	SAC CEM 21-SM68-2-21-( )
	This battery charger supplies charging current to battery bank (BAT 1010) which provides power for the detection system. The battery charger should indicate between 122 and 139 VDC; if below 121 VDC, the high rate light (red or amber) should be lighted. The ammeter high rate indication will be a maximum of 6 amperes, and a trickle rate maximum of 800 MA.
4	Motor control center (MCC 1020)
	All circuit breakers. . . . . ON
	GROUND LIGHTS (3) . . . . . ON

Figure 3-14A. Facility Technician Alert Status Monitoring Procedure (Operational Bases) (Sheet 1 of 4)

STEP	PROCEDURE
4 (CONT)	This motor control center contains the main circuit breaker and supplies power to the following units: a. Anemometerpanel and radiation probe control unit which supplies power for wind velocity meter and radiation detectors. b. Communication panel which supplies power to provide communications capability from control center to power house. c. Guidance motor A and B which supplies power to guidance motor generator. d. Air conditioning control which supplies power to AC2032. e. Guidance generator which supplies power to guidance generator sets. ANTENNA TERMINAL
5	MLO . . . . . Notified T.O. not required Facility technician will report to the MLO that he has arrived at the antenna terminal and requests that the antenna keys be placed in MAINT position.
6	Circuit breakers (MCC 1040) . . . . . ON SAC CEM 21-SM68-2-21-( ) Power is supplied through circuit breakers on MCC 1040 to the air conditioning equipment and the air compressor supplying controlled pneumatic pressure for air conditioning valves that are required to operate during a countdown. All HAND-OFF-AUTO switches will be verified in the AUTO position.
7	Circuit breakers (distribution panels 1060/1061). . . . . ON Power is supplied through these circuit breakers for lights, receptacles, and emergency lights.
8	AC2042 (CTR 2156) . . . . . Green SAC CEM 21-SM68-2-20-( )

Figure 3-14A. Facility Technician Alert Status Monitoring Procedure (Operational Bases) (Sheet 2 of 4)

STEP	PROCEDURE
8 (CONT)	AC2042 supplies cool air to guidance cabinets in the antenna terminal. Proper operation of this unit is necessary for sustained guidance operation.
	ANTENNA SILO A
9	BLOWER. . . . . ON T.O. 21M-HGM25A-2-7-7 Facility technician verifies antenna blower switch, located on the third level of the antenna silo, is in the ON position.
10	Hydraulic pressures . . . . . In Tolerance Facility technician checks the hydraulic accumulator pressures to insure they are within tolerance (1850 to 2950 PSI).
11	Air Compressor (CC 5030) Supply tank pressure. . . . . Green Control pressure. . . . . Green Oil level . . . . . Checked Drain tank. . . . . Accomplished SAC CEM 21-SM68-2-20-( ) This air compressor supplies controlled pneumatic pressure to AC2042 valves. Operation of this compressor is necessary during all guidance countdowns. The facility technician checks that supply and control pressure is available for AC2042 pneumatic valves, checks oil for proper level, and drains the air tank of water. Note Perform step 12 only if outside air temperature is below +40 degrees F.
12	ENVIRONMENTAL SEAL HEATING SYSTEM Expansion tank. . . . . Checked Circulating pump. . . . . Checked

Figure 3-14A. Facility Technician Alert Status Monitoring Procedure (Operational Bases) (Sheet 3 of 4)

STEP	PROCEDURE
12 (CONT)	The ethlene glycol expansion tank is checked to insure it is at least 3/4 full, and the circulating pump for operation when the outside temperature is below +40 degrees F.
	Note Repeat steps 9 and 10 for antenna B.
13	MLO . . . . . Notified T.O. not required Facility technician notifies the control center that alert status monitoring procedures have been completed.

Figure 3-14A. Facility Technician Alert Status Monitoring Procedure (Operational Bases) (Sheet 4 of 4)

STEP	PROCEDURE
	MECHANICAL EQUIPMENT ROOM
1	Air compressor (CC 2001)
	Supply tank pressure. . . . . Green
	Control pressure. . . . . Green
	Oil level . . . . . Checked
	Drain tank. . . . . Accomplished
	SAC CEM 21-SM68-2-20-( )
	This air compressor located in work area 6K, furnishes supply pressure to pneumatic temperature, humidity and pressure controllers for air conditioning equipment, and pneumatic flow control valves in the operational control centers and fuel storage area.
2	AC2001 thermometer TI 2006. . . . . Green
3	AC2002 thermometer TI 2009. . . . . Green
4	AC2003 thermometer TI 2015. . . . . Green
	AC2001 supplies cool air to equipment in the operational control centers. AC2002 and AC2003 supplies conditioned air to other portions of the control center work area.
	ELECTRICAL EQUIPMENT ROOM
5	Battery charger (REC 1602)
	GROUND indicating lights. . . . . Same Intensity
	DC VOLTS. . . . . Green
	DC AMPERES. . . . . Green
	SAC CEM 21-SM68-2-21-( )
	This battery charger supplies charging current to the battery bank which provides power for the detection system. The DC AMPERES high rate indication will be a maximum of 9 amperes, and a trickle rate maximum of 800 MA.
6	Motor control center (MCC 1509 and MCC 1510) circuit breakers. . . . . ON

Figure 3-14B. Facility Technician Alert Status Monitoring Procedure (VAFB) (Sheet 1 of 3)

STEP	PROCEDURE
	ANTENNA TERMINAL
7	MLO . . . . . Notified T.O. not required Facility technician will report to the MLO that he has arrived at the antenna terminal and requests that the antenna keys be placed in MAINT position.
8	Circuit breakers (MCC 1512) . . . . . ON SAC CEM 21-SM68-2-21-1
9	AC2602 (TI 2618). . . . . Green SAC CEM 21-SM68-2-20-1 MCC 1512 supplies power, through circuit breakers, to air conditioner AC2602 and air compressor CC 2601.
10	Air compressor (CC 2601) Supply tank pressure. . . . . Green Control Pressure. . . . . Green Oil level . . . . . Checked Drain tank. . . . . Accomplished Air compressor CC 2601 supplies controlled pneumatic pressure to AC2602 valves. Operation of this compressor is necessary during all guidance countdowns. The facility technician checks that supply and control pressure is available for AC2602 pneumatic valves, checks oil for proper level, and drains the air tank of water.
	ANTENNA SILO A WARNING The hand crank socket must be engaged and crank grasped firmly before disengaging the drum lock.
11	Gangway . . . . . Lowered T.O. 21M-HGM25A-2-7-7

Figure 3-14B. Facility Technician Alert Status Monitoring Procedure (VAFB) (Sheet 2 of 3)

STEP	PROCEDURE
11 (CONT)	To lower the gangway assembly the crank must be connected to the hand operated winch assembly. The gangway assembly pip pin is then removed, and drum lock disengaged.
12	BLOWER. . . . . ON Facility technician verifies antenna blower switch, located on the third level of the antenna silo, is in the ON position.
13	Hydraulic pressures . . . . . In Tolerance Facility technician checks the hydraulic accumulator pressures to insure they are within tolerance (1850 to 2950 PSI.)
14	Gangway . . . . . Raised To raise the gangway assembly, engage the drum lock, turn hand crank as necessary, insert gangway assembly pip pin, and then remove and store the crank.
15	RAILS STORED. . . . . Not Lighted RAILS STORED indicator is located on control panel 29A3A2.
	Note Repeat steps 11 through 15 for antenna B.
16	MLO . . . . . Notified T.O. not required Facility technician notifies the control center that alert status monitoring procedures have been completed.

Figure 3-14B. Facility Technician Alert Status Monitoring Procedure (VAFB) (Sheet 3 of 3)

LOCAL TIMES	SUNRISE + 1:00		1200	SUNSET + 1:00	2400
WEATHER CONDITIONS	FORECAST	CURRENT	CURRENT	CURRENT	CURRENT
SKY CONDITIONS CLEAR ○ SCATTERED ∅ BROKEN ◐ OVERCAST ⊕					
VISIBILITY					
WIND					
HAZARDS					
PRESSURE IN MILLIBARS (UNCORRECTED)					

SEVERE WEATHER ADVISORY VALID TIME _____

ADVISORY AS FOLLOWS _____

Figure 3-15. Typical Weather Chart

STEP	PROCEDURE
	CALCULATION FOR A TERM
1	Obtain pressure (correct as required to elevation at the complex) and set the cursor over the appropriate number on the PRESSURE-MILLIBARS scale.
2	Obtain dry bulb temperature and adjust center scale so that dry bulb temperature is directly above appropriate figure on PRESSURE-MILLIBARS scale.
3	Read and record the number that appears above A TERM.
	CALCULATION FOR B TERM
1	Obtain dew point temperature and set cursor over appropriate number on DEW POINT TEMPERATURE ^{O}F SCALE.
2	Obtain dry bulb temperature and adjust center scale so that dry bulb temperature is directly over appropriate figure on DEW POINT TEMPERATURE ^{O}F SCALE.
3	Read and record the number that appears above the B TERM.
	Note In the event the value of the B TERM is off scale to the left, the B TERM need not be used in the calculation for the index of refraction constant. This will occur in those cases where the moisture content of the air will not contribute a significant index of refraction error.
	CALCULATION OF INDEX VALUE
1	Add A TERM and B TERM to obtain the index of refraction.
2	Record index of refraction.

Figure 3-16. Index of Refraction Calculation Procedure

(Text continued from page 3-30.)

3-91. An index of refraction log will be maintained on general purpose worksheets, SAC FORM 210. An entry will be made each time a computation is made and will include the following information: date, name of individual making computation, local time, atmospheric pressure in millibars, correction factor for site elevation, corrected pressure in millibars, dry bulb temperature, wet bulb temperature, A term, B term, and index of refraction.

3-92. A piece of acetate will be affixed near the left end of the missile guidance console for grease pencil recording of the most current index of refraction. This is to insure that the current index is readily available at the missile guidance console for a countdown.

3-93. If the barometric pressure used to calculate index of refraction is obtained from a weather station, the GEO must insure that the necessary elevation correction has been applied. To make the necessary elevation correction, subtract 3.4 millibars from the weather station pressure (not sea level) for each 100 feet that the launch site antenna is above the weather station. If the antenna is below the weather station, add 3.4 millibars for each 100 feet. Elevation of antenna may be found on the missile launch site data sheet.

3-94. LAUNCH SITE TARGETING PROCEDURE. (See figures 3-17 thru 3-28.)

3-95. The launch site targeting contains the necessary functions of launch site targeting for all Titan I squadrons. The retargeting flow diagram (figure 3-17) will be used to determine the course to follow when retargeting the system. Figures 3-18 thru 3-24 are used for normal targeting of the system and are performed whenever time limitations are not a primary concern. Figures 3-25 thru 3-28 contain fast retargeting procedures which are used when it is essential to retarget the system in the shortest possible time and are performed simultaneously by the GEO and MLO. A launch site targeting log will be established utilizing SAC form 210. The log will contain date of installation, control number of the targeting package, signature of the individual performing the installation of the targeting package and any significant remarks. Each time a targeting package, a portion of a targeting package or maintenance tapes are installed in the guidance computer an entry will be made in the launch site targeting log. Figure 3-21 illustrates a typical printed record from digital guidance simulation.

3-96. LAUNCH AND EXERCISE COUNTDOWNS.

3-97. The launch and exercise countdowns consist of alert and fast reaction message procedures prior to launch/exercise, countdown procedures for launch/exercise, post shutdown procedures, and launch countdown system functions.

3-98. ALERT PROCEDURES.

3-99. When an alert is initiated, immediate reaction by all personnel to the alert must be the same, whether the alert is actual, simulated or an exercise. Notification of an alert will be identical in all situations. Upon receipt of a message requiring the alerting of the complex, the MCCC (Deputy MCCC in his absence) will activate the alterting device, or utilizing the PA system, will announce, "ALERT, ALERT, ALERT".

(Text continued on page 3-123.)

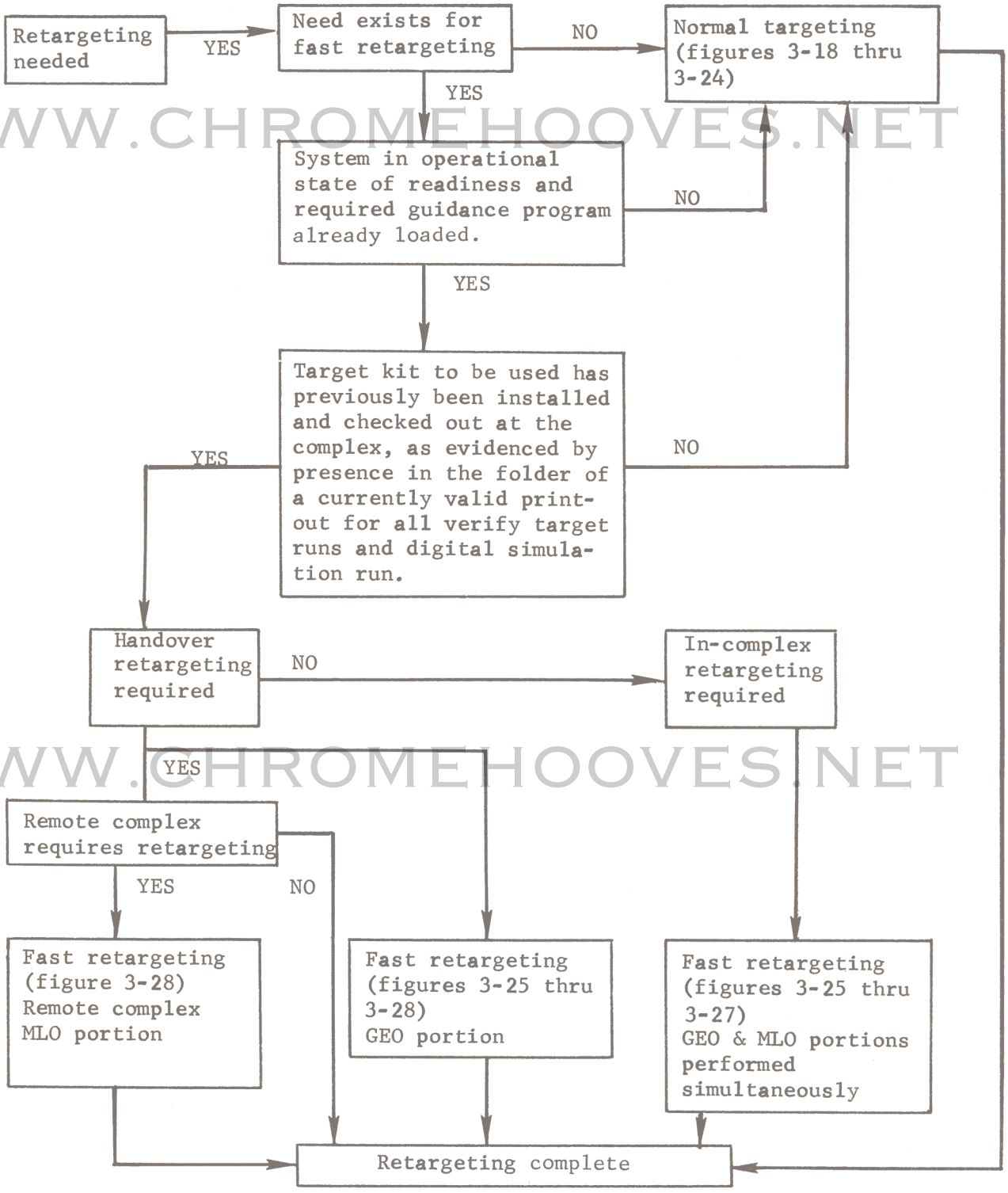

Figure 3-17. Retargeting Flow Diagram

STEP	PROCEDURE
	Check the ground guidance system is in standby condition.
1	Guidance control target trajectory kit folder..... Checked T.O. 31X7-2-1-151 The GEO checks the guidance control target trajectory kit folder for the following items: a. Target kit identification sheet. b. Guidance computer tape information sheet. c. Target tape contents sheet. d. USAF missile launch site data sheets. e. Coordinate data table (filled in.) The GEO will check that the dates listed on lower right of the target and handover target kit identification sheets correspond exactly with the dates on the current USAF missile launch site data sheets and appropriate coordinate data tables. Discrepancies will be referred to the TMCO for resolution. Dates listed for azimuth and range coordinate data on target and handover kit identification sheets will be compared with dates on superseded identification sheets. If the dates for azimuth data differ, an antenna azimuth program alignment must be performed in accordance with T.O. 21-SM68-2J-7-1-2 and T.O. 21-SM68-2J-6-1. If the dates for range data differ, a range program must be performed in accordance with T.O. 21-SM68-2J-7-1-1 and T.O. 21-SM68-2J-6-1 (Refer to AZIMUTH, ELEVATION, and RANGE readout.) These programs must be performed after figures 3-18, 3-19, and 3-20 of this procedure have been completed. The guidance computer tape information sheet control number shall be the same as the target kit identification sheet control number. The target tape contents sheet control number shall be the same as the target kit identification sheet control number.
2	Target tapes..... Checked The target tape leader (control number and effective date) shall be the same as the guidance computer tape information sheet.

Figure 3-18. Inventory Targeting Package Procedure (Sheet 1 of 2)

STEP	PROCEDURE
3	Guidance program tapes..... Checked The guidance program tape leader (the word GUIDANCE, the effective date, the BN number, and two letters) shall be the same as the guidance computer tape information sheet.
4	Digital simulation tapes..... Checked The digital simulation tape leader (the word SIMULATION, the effective date, and two letters) shall be the same as the guidance computer tape information sheet.
5	Launch control target trajectory kit folder..... Checked The GEO checks the launch control target trajectory kit folder for the following items: a. One target kit identification sheet b. One re-entry vehicle cards tally sheet c. Two sets R/V cards d. One launch control console labels sheet e. Two sets launch control console labels f. Handover target kit identification sheets (one for each of the other complexes as applicable) The target kit identification sheet control number shall be the same as the control number on the target kit identification sheet of the guidance control target kit folder. The re-entry vehicle cards sheet control number shall be the same as the target kit identification sheet control number. The color coding and the number of R/V cards, the TIN numbers, the DGZ numbers, and control numbers on the R/V cards shall be the same as information on the re-entry vehicle cards sheets. The launch control console label sheet control number shall be the same as the target kit identification sheet control number. The number of launch control console labels and the TIN numbers and DGZ numbers on the labels shall be the same as information appearing on the launch control console labels sheet.

Figure 3-18. Inventory Targeting Package Procedure (Sheet 2 of 2)

STEP	PROCEDURE	
	MISSILE GUIDANCE CONSOLE	
1	STBY T.O. 21-SM68-2J-7-1-1 T.O. 31X7-2-1-151	Green
2	ANTENNA A or B FACILITY MAINT	Green
3	ANTENNA A or B FACILITY SELECT (as applicable)	Green
4	HANDOVER OFF	Green
	The GEO checks the guidance console to insure that the above indications are displayed prior to pressing POWER ON.	
5	Press POWER ON	White
	TAPE READER 2	
6	LOAD	Pressed
7	POWER ON	Pressed
8	POWER indicator	White
9	LOAD indicator	Yellow
10	BULB ON	Amber
11	Guidance tape	Mounted and Threaded
	Manually wind tape until all conductive leader is on take-up reel and beginning of program data is at reverse capstan.	
12	Control arms at null point	Positioned
13	STAND BY	Pressed
14	STAND BY indicator	Blue
15	REMOTE	Pressed
16	REMOTE indicator	Green

Figure 3-19. Install and Verify Guidance Program Tape and Target Tape Procedure (Sheet 1 of 6)

STEP	PROCEDURE	
	TAPE READER 1	
17	LOAD	Pressed
18	POWER ON	Pressed
19	POWER indicator	White
20	LOAD indicator	Yellow
21	BULB ON	Amber
22	Target tape	Mounted and Threaded
	Manually wind tape until all conductive leader is on take-up reel and beginning of program data is at reverse capstan.	
23	Control arms at null point	Positioned
24	STAND BY	Pressed
25	STAND BY indicator	Blue
26	REMOTE	Pressed
27	REMOTE indicator	Green
	MISSILE GUIDANCE CONSOLE	
28	POWER ON	Green
	POWER ON indicator will indicate green approximately 2 minutes and 30 seconds after pressing POWER ON pushbutton indicator.	
29	Press MAINT	Yellow
	COMPUTER SET CONSOLE	
30	POWER ON	Green
31	MAINT	White
32	Press HOLD MAINT	Amber
33	Press NORMAL RATE	Green

Figure 3-19. Install and Verify Guidance Program Tape and Target Tape Procedure (Sheet 2 of 6)

STEP	PROCEDURE
34	EXECUTE PROGRAM..... White
35	STEP/STOP..... Amber
36	READY..... White
37	TARGET REF..... White
38	Guidance program TAPE BLOCK NUMBER..... Set
	The TAPE BLOCK NUMBER is listed on the guidance computer tape information sheet.
39	Press LOAD PROGRAM..... White
40	Press TAPE READER 2..... White
	No other computer console lower-panel indicators should be lighted except those previously listed. Should any other indicator be lighted, press indicator or position appropriate switch to normal position for a not lighted indication.
41	Press READY..... White
42	Press RUN..... Green
	TAPE READER 2
43	Guidance tape movement..... Checked
	The guidance tape moves forward and stops near end of tape.
	COMPUTER SET CONSOLE
44	TAPE READER CONTROL STOP..... Lighted
45	TAPE FAULT indicators..... Not Lighted
	Guidance data is now loaded on magnetic drum.
46	RUN..... Not Lighted
47	STEP/STOP..... Amber
48	Target TAPE BLOCK NUMBER..... Set

Figure 3-19. Install and Verify Guidance Program Tape and Target Tape Procedure (Sheet 3 of 6)

STEP	PROCEDURE
	The target TAPE BLOCK NUMBER is listed on the target tape contents sheet.
49	Press TAPE READER 1..... White
50	Press READY..... White
51	Press RUN..... Green
	TAPE READER 1
52	Target tape movement..... Checked
	The target tape moves forward, and stops near end of tape.
	COMPUTER SET CONSOLE
53	TAPE READER CONTROL STOP..... Lighted
54	TAPE FAULT indicators..... Not Lighted
	Targeting data is now loaded on magnetic drum.
55	RUN..... Not Lighted
56	STEP/STOP..... Amber
57	Press VERIFY PROGRAM..... White
58	Press READY..... White
59	Press RUN..... Green
	TAPE READER 1
60	Target tape movement..... Checked
	The target tape rewinds, moves forward, then stops near end of tape.
	COMPUTER SET CONSOLE
61	TAPE READER CONTROL STOP..... Lighted
62	TAPE FAULT indicators..... Not Lighted
	Target data is now verified.

Figure 3-19. Install and Verify Guidance Program Tape and Target Tape Procedure (Sheet 4 of 6)

STEP	PROCEDURE
63	RUN..... Not Lighted
64	STEP/STOP..... Amber
	TAPE READER 1
65	REVERSE..... Pressed
66	REVERSE indicator..... White
67	Target tape..... Rewound
68	END OF TAPE..... Red
	COMPUTER SET CONSOLE
69	Guidance program TAPE BLOCK NUMBER..... Set
	The guidance program tape block number is listed on the guidance computer tape information sheet.
70	Press TAPE READER 2..... White
71	Press READY..... White
72	Press RUN..... Green
	TAPE READER 2
73	Guidance tape movement..... Checked
	The guidance tape rewinds, then moves forward and stops.
	COMPUTER SET CONSOLE
74	TAPE READER CONTROL STOP..... Lighted
75	TAPE FAULT indicators..... Not Lighted
	Guidance data is now verified.
76	RUN..... Not Lighted
77	STEP/STOP..... Amber
	TAPE READER 2
78	REVERSE..... Pressed

Figure 3-19. Install and Verify Guidance Program Tape and Target Tape Procedure (Sheet 5 of 6)

STEP	PROCEDURE
79	REVERSE indicator..... White
80	Guidance tape..... Rewound
81	END OF TAPE..... Red
	TAPE READER 1
82	LOAD..... Pressed
83	LOAD indicator..... Yellow
84	Control arms..... Locked
85	Target tape..... Removed
86	END OF TAPE..... Not Lighted
87	Target tape..... Stored
88	POWER OFF..... Pressed
89	All indicators..... Not Lighted
	TAPE READER 2
90	LOAD..... Pressed
91	LOAD indicator..... Yellow
92	Control arms..... Locked
93	Guidance tape..... Removed
94	END OF TAPE..... Not Lighted
95	Guidance tape..... Stored
96	POWER OFF..... Pressed
97	All indicators..... Not Lighted
	COMPUTER SET CONSOLE
98	Press READY..... White
	The guidance program and targeting tapes are now loaded and verified, but guidance computer is not in an operational state of readiness until figure 3-20, digital guidance simulation, has been completed.

Figure 3-19. Install and Verify Guidance Program Tape and Target Tape Procedure (Sheet 6 of 6)

STEP	PROCEDURE
	Verify that figure 3-19 has been accomplished.
	DIGITAL DATA PRINTER
1	ON/OFF switch..... ON T.O. 21-SM68-2J-6-1 T.O. 21-SM68-2J-7-1-1 T.O. 21-SM68-2J-7-1-2 T.O. 31X7-2-1-151
	POWER DISTRIBUTION GROUP
2	PEIRPHERAL A.C. POWER PRINTER..... Green
	ELECTRONIC FREQUENCY CONVERTER
3	OPERATE circuit breaker..... ON
4	STANDBY circuit breaker..... ON
	COMPUTER SET CONSOLE
5	POWER ON..... Green
6	HOLD MAINT..... Amber
7	MAINT..... White
8	NORMAL RATE..... Green
9	STEP/STOP..... Amber
10	READY..... White
	POWER SUPPLY GROUP
11	Press CYCLE DC OFF..... Amber
12	SIMULATOR selector..... ON
13	Press CYCLE DC ON..... Amber The CYCLE DC ON will remain amber for approximately one minute and 15 seconds and then becomes not lighted.
	COMPUTER SET CONSOLE
14	POWER ON..... Green

Figure 3-20. Digital Guidance Simulation Procedure (Sheet 1 of 5)

STEP	PROCEDURE
	SIMULATOR-VERIFIER
15	Press OPERATIONAL CONTROLS TEST NORM..... TEST White
16	Press NORMAL RATE..... Green
17	READY..... Pressed
18	CYCLE COUNT..... Reset
19	Press OPERATIONAL CONTROLS TEST NORM..... NORM Green
20	Press INPUT SELECTION TR1/TR2..... TR2 Green
	TAPE READER 2
21	LOAD..... Pressed
22	POWER ON..... Pressed
23	POWER indicator..... White
24	LOAD indicator..... Yellow
25	BULB ON..... Amber
26	Digital guidance simulation tape..... Mounted and Threaded Manually wind the tape until all the conductive leader is on the takeup reel and the beginning of the program data is at the reverse capstan.
27	Control arms at null point..... Positioned
28	STAND BY..... Pressed
29	STAND BY indicator..... Blue
30	REMOTE..... Pressed
31	REMOTE indicator..... Green
	ELECTRONIC FREQUENCY CONVERTER
32	STANDBY..... Lighted
33	OPERATE..... Lighted

Figure 3-20. Digital Guidance Simulation Procedure (Sheet 2 of 5)

STEP	PROCEDURE	
	SIMULATOR-VERIFIER	
34	Press READY	Green
	COMPUTER SET CONSOLE	
35	Press HOLD MAINT	Not Lighted
36	Press SIMULATOR	White
37	Press EXECUTE PROGRAM	White
38	Press NORMAL RATE	Green
39	Press RUN	Green
	SIMULATOR-VERIFIER	
40	Press STEP/RUN	Green
	TAPE READER 2	
41	Simulation tape	Moves Forward
	SIMULATOR-VERIFIER	
42	CYCLE COUNT	Counting
	TAPE READER 2	
43	Simulation tape	Stopped
	The digital guidance simulation tape will stop near the end of the tape.	
	SIMULATOR-VERIFIER	
44	OPERATIONAL CONTROLS ERR STOP/OK STOP	OK STOP Green
	TAPE READER 2	
45	REVERSE	Pressed
46	REVERSE indicator	White
47	Simulation tape	Rewinds
	While digital guidance simulation tape rewinds, continue the procedures.	

Figure 3-20. Digital Guidance Simulation Procedure (Sheet 3 of 5)

STEP	PROCEDURE
	DIGITAL DATA PRINTER
48	Printout..... Checked
	Verify that the title word, first seven lines of H constants and last two lines specifying miss distance correspond to the values illustrated in figure 3-21. The sign in the extreme left column of the eighth line will be + if the value set up in the corresponding place at the computer constants register is 0 through 8. The sign will be - if the value set up is 9. The next three values in the eighth line will be 0 and the remaining four values will be the corresponding places at the computer constants register. The last two lines of the printout will be checked against the miss distance printout listed on the guidance computer tape information sheet in the guidance control target trajectory kit. Digital guidance simulation has now been completed.
	COMPUTER SET CONSOLE
49	Press HOLD MAINT..... Amber
	POWER SUPPLY GROUP
50	Press CYCLE DC OFF..... Amber
51	SIMULATOR selector..... OFF
52	Press CYCLE DC ON..... Amber
	The CYCLE DC ON indicator will remain amber for approximately one minute and 15 seconds and then become not lighted.
	COMPUTER SET CONSOLE
53	POWER ON..... Green
54	NORMAL RATE..... Green
	Press NORMAL RATE pushbutton indicator if it does not light after POWER ON indicator lights green.
55	MANUAL POWER SEQUENCE..... Not Lighted

Figure 3-20. Digital Guidance Simulation Procedure (Sheet 4 of 5)

STEP	PROCEDURE
56	Press SIMULATOR..... Not Lighted
57	Press HOLD MAINT..... Not Lighted
58	Press READY..... White
	TAPE READER 2
59	Simulation tape..... Rewound
60	END OF TAPE..... Red
61	LOAD..... Pressed
62	LOAD indicator..... Yellow
63	Control arms..... Locked
64	Simulation tape..... Removed
65	END OF TAPE..... Not Lighted
66	Simulation tape..... Stored
67	POWER OFF..... Pressed
68	All indicators..... Not Lighted
	MISSILE GUIDANCE CONSOLE
69	Press STBY..... Green
	Guidance computer is now in an operational state of readiness.

Figure 3-20. Digital Guidance Simulation Procedure (Sheet 5 of 5)

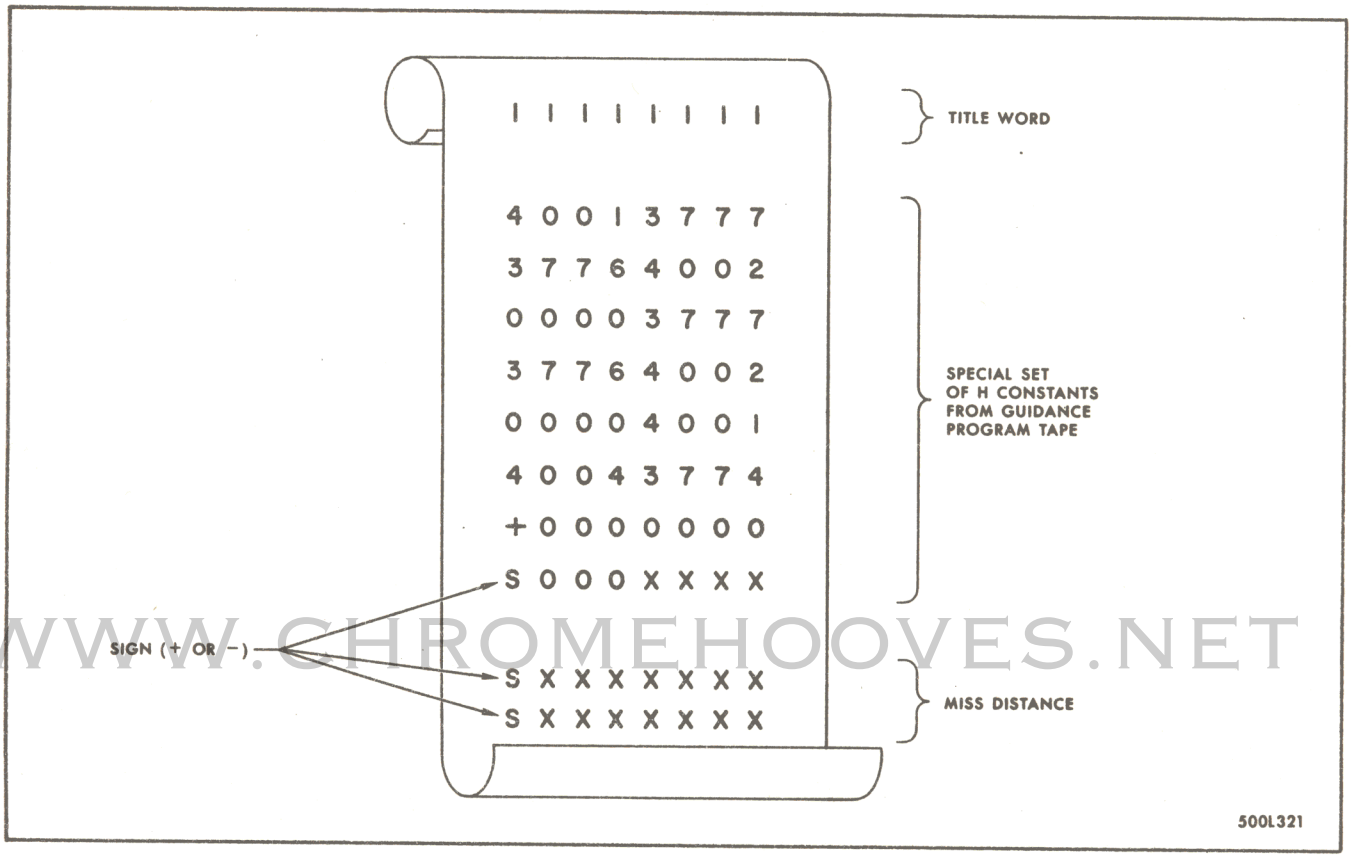

Figure 3-21. Printed Record from Digital Guidance Simulation

STEP	PROCEDURE
	Target card reader and logic assemblies key. Target selection door panel key. Launch control target kit folder. Target cards and labels. TARGET CARD READER AND LOGIC ASSEMBLIES
1	Lamp verify switches..... OFF T.O. 31X7-2-1-151
2	TARGET indicators (as applicable)..... GREEN LAUNCH CONTROL CONSOLE CAUTION Do not turn any TARGET SELECTION switch to a not used position. Failure to observe this caution may cause serious damage to the re-entry vehicle.
3	TARGET SELECTION LAUNCHER NO. 1, 2 and 3..... A Set all PULL TO TURN switches to position A. TARGET CARD READER AND LOGIC ASSEMBLIES CAUTION Do not open a R/V card holder if it is lighted. Failure to observe this caution may cause serious damage to the re-entry vehicle.
4	R/V card holders..... Opened Open only the unlighted R/V card holders by inserting key and unlocking.
5	TARGET indicators..... Red The target indicators will be red for corresponding open R/V card holders.
6	R/V cards..... Removed Remove the R/V cards from the open R/V card holders and return to appropriate target kit.

Figure 3-22. R/V Cards and Launch Console Label Installation Procedure (Sheet 1 of 4)

STEP	PROCEDURE
	CAUTION To avoid damaging the new R/V cards, insure that card holders are in the full open position.
7	R/V cards..... Inserted The R/V card or cards supplied for each launcher are to be inserted as designated on the re-entry vehicle cards sheet. If any R/V cards within the same color group bear the same identification number, the order will be determined by inspecting the hole positions punched in the R/V card. Hole position H-1 is punched for target A, H-2 for target B, and H-3 for target C. The R/V Cards are inserted with cut at lower left corner.
8	Close PUSH TO CLOSE actuators.....Locked
9	TARGET indicators..... Green The target indicators for the R/V cards inserted must be green.
	LAUNCH CONTROL CONSOLE
	CAUTION Do not turn any TARGET SELECTION switch to a not used position. Failure to observe this caution may cause serious damage to the re-entry vehicle.
10	TARGET SELECTION LAUNCHER NO. 1, 2 and 3..... B Set all PULL TO TURN swithces to target B.
	TARGET CARD READER AND LOGIC ASSEMBLIES
11	R/V card holders A (launchers 1, 2 and 3)..... Opened The A R/V card holders will be opened by inserting key and unlocking.

Fig. 3-22. R/V Cards and Launch Console Label Installation Procedure (Sheet 2 of 4)