

# ABBREVIATED CHECKLIST

## NORMAL OPERATING PROCEDURES DEPUTY MISSILE COMBAT CREW COMMANDER (DMCCC)

### LAUNCH AREA

SECTIONS: 7

PAGES: 30

### USAF MODEL **HGM-16F** MISSILE WEAPON SYSTEM

#### SQUADRON COMPLEXES

OSTF-2	576-D, E
550	577
551	578
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**INTRODUCTION (CONT)**


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SECTION NO. (CONT)	TITLE (CONT)	CREW MEMBER (CONT)
2.	COMPLEX SAFETY BRIEFING	MCCC, DMCCC
3.	MISSILE CREW CHANGEOVER BRIEFING	MCCC
4.	EWO COMPLEX ACCEPTANCE PROCEDURES	MCCC
5.	MISSILE COMBAT CREW OPERATIONS BRIEFING	MCCC
6.	ACTIVITY COORDINATION BRIEFING	MCCC, DMCCC
7.	COMPLEX MONITORING (LAUNCH CONTROL CENTER)	MCCC, DMCCC
7B.	COMPLEX MONITORING—SIX-HOUR RE- QUIREMENT	EPPT, MFT, BMAT
8.	MISSILE CREW DAILY COMPLEX STATUS VERIFICATION CHECKLIST	EPPT, MFT, BMAT
9.	MGS, ALIGNED, NOT-ALIGNED PROCEDURES	BMAT
10.	MISSILE LIFTING SYSTEM CORRELATION	MFT, BMAT
11.	DIESEL GENERATOR OPERATIONS AT PRCP (NA-OSTF-2)	EPPT
11A.	DIESEL GENERATOR AND POWER CO. LINE OPERATIONS AT PRCP (OSTF-2 ONLY)	EPPT

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## INTRODUCTION

This material contains procedures prepared for normal operating conditions at the launch area. These procedures are presented as checklists and are abbreviated from tables in section III of T.O. 21M-HGM16F-1. Normal Operating Procedures Abbreviated Checklists of all crew members are listed below:

T.O. NUMBER	TITLE
21M-HGM16F-1CL-1	MISSILE COMBAT CREW COMMANDER (MCCC)
21M-HGM16F-1CL-2	DEPUTY MISSILE COMBAT CREW COMMANDER (DMCCC)
21M-HGM16F-1CL-3	ELECTRICAL POWER PRODUCTION TECHNICIAN (EPPT)
21M-HGM16F-1CL-4	MISSILE FACILITIES TECHNICIAN (MFT)
21M-HGM16F-1CL-5	BALLISTIC MISSILE ANALYST TECHNICIAN (BMAT)

Individual checklists within each T.O. are designated as sections and are numbered in the same sequence as the corresponding tables from which extracted. Each section (except sections 16 through 18) bears the same title and contains the same item, action, and step numbers as the corresponding amplified table. Page numbers are a combination of the section number and the sequence numbering of the pages of the section.

The normal operating procedures covered by the checklists are listed below. Each crew member does not require all of the sections, therefore, each T.O. contains only the sections for which the member has a task as indicated in crew member-column.

SECTION NO.	TITLE	CREW MEMBER
1.	COMPLEX ACCESS AND EXIT PROCEDURE	MCCC, DMCCC

(CONTINUED ON NEXT PAGE)

**INTRODUCTION (CONT)**

completion of the memorized items, reference shall be made to the applicable checklist which shall then be accomplished in its entirety. At this time, memory items which have already been completed shall be verified.

The following is a list of abbreviations and short form nomenclature used in these checklists:

SHROT FORM	LONG FORM
AFR	air force regulation
AGE	aero space ground equipment
BOI	break of inspection
CD	countdown
CSMOL	control station manual operating level
DEFCON	defense condition
EMCC	essential motor control center
EWO	emergency war order
FRCP	facility remote control panel
GN <sub>2</sub>	gaseous nitrogen
GO <sub>2</sub>	gaseous oxygen
HCU	helium control charging unit
HPU	hydraulic pumping unit
LCC	launch control center
LCOC	launch control officer's console

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**INTRODUCTION (CONT)**


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SECTION NO. (CONT)	TITLE (CONT)	CREW MEMBER (CONT)
12.	DIESEL GENERATOR OPERATIONS AT 480-VOLT SWITCHGEAR (NA-OSTF-2)	EPPT
12A.	DIESEL GENERATOR AND POWER CO. LINE OPERATIONS AT 480-VOLT SWITCHGEAR (OSTF-2 ONLY)	EPPT
13.	TV SYSTEM OPERATION	MFT
14.	RE-ENTRY VEHICLE PRELAUNCH MONITOR TARGET SETTING PROCEDURES	MCCC
15.	PLX PREPARATION AND COORDINATION PROCEDURES	MCCC, DMCCC
16.	COUNTDOWN	ALL
17.	ABORT	ALL
18.	POST-LAUNCH ABORT (TACTICAL)	MCCC

The checklists are arranged in two-column demand-response format. Demands are listed in the left column and responses to the demands are given in the right column. Blank lines are provided where required for check-off, recording, or initialing.

Distinctively printed (bold print) items contained in these checklists shall be committed to memory. Word-for-word memorization is not required, however, crew members must be able to accomplish all necessary actions quickly and accurately. All bold-print items shall be performed from memory with out checklist referral and in the order in which the steps appear in the checklists. Upon

(CONTINUED ON NEXT PAGE)

**INTRODUCTION (CONT)**

SHORT FORM (CONT)	LONG FORM (CONT)
LES	launch enable system
LN <sub>2</sub>	liquid nitrogen
LO <sub>2</sub>	liquid oxygen
LP	launcher platform
MEA	missile enclosure area
MEPU	missile enclosure purge unit
MGS	missile guidance set
MLS	missile lifting system
MOCAM	mobile checkout and maintenance
NCU	nitrogen control unit
NEMCC	nonessential motor control center
N/T	nontactical
OSTF-2	operational system test facility NO. 2
PLM	prelaunch monitor
PLX	propellant loading exercise
PRCP	power remote control panel
PSC	pressure system control
PSMR	pneumatic system manifold regulator
PTS	pneumatic test set
RPIE	real property installed equipment
SSB	single sideband
VAFB	vandenberg air force base
Z	zulu time

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**COMPLEX ACCESS AND EXIT PROCEDURES (CONT)**

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**COMPLEX EXIT**

- |     |   |           |       |
|-----|---|-----------|-------|
| 1.  | PERSONNEL TO PROCEED TO ENTRAPMENT AREA, OPENING ONE BLAST DOOR AT A TIME                 | DIRECTED  | _____ |
| 2.  | BLAST DOORS   | MONITORED | _____ |
| 3.  | REQUEST TO ENABLE OUTER ENTRAPMENT DOOR   | RECEIVED  | _____ |
| 4.  | INNER ENTRAPMENT DOOR CLOSED  | VERIFIED  | _____ |
| 5.  | OUTER ENTRAPMENT DOOR   | ENABLED   | _____ |
| 6.  | OUTER ENTRAPMENT DOOR CLOSED  | VERIFIED  | _____ |
| 7.  | REQUEST TO OPEN GATE  | RECEIVED  | _____ |
| 8.  | GATE OPEN   | ENABLED   | _____ |
| 9.  | GATE CLOSED   | VERIFIED  | _____ |
| 10. | REQUEST TO DEPART COMPLEX AREA  | RECEIVED  | _____ |
| 11. | PERMISSION TO DEPART COMPLEX AREA AFTER VERIFICATION THAT ALL SECURITY PORTALS ARE CLOSED | GRANTED   | _____ |



## COMPLEX ACCESS AND EXIT PROCEDURES

### PRELIMINARY INSTRUCTIONS

This checklist shall be used by the complex controller to ensure that only authorized personnel enter the complex. This checklist is abbreviated from procedures in section III, T.O. 21M-HGM16F-1.

### COMPLEX ACCESS

1.	AUTHORITY FOR ACCESS	ESTABLISHED	_____
2.	PERSONNEL TO PROCEED TO ENTRAPMENT DOOR	DIRECTED	_____
3.	GATE	ENABLED	_____
4.	GATE CLOSED	VERIFIED	_____
5.	OUTER ENTRAPMENT DOOR	ENABLED	_____
6.	OUTER ENTRAPMENT DOOR CLOSED	VERIFIED	_____
7.	PERSONNEL IDENTITY	ESTABLISHED	_____
8.	ENTERING PERSONNEL TO OPEN ONE BLAST DOOR AT A TIME AND PROCEED DIRECTLY TO LCC, LEVEL 2	DIRECTED	_____
9.	INNER ENTRAPMENT DOOR	ENABLED	_____
10.	INNER ENTRAPMENT DOOR CLOSED	VERIFIED	_____
11.	BLAST DOORS	MONITORED	_____
12.	PERSONNEL IN LCC, LEVEL 2	REPORTED	_____

(CONTINUED ON NEXT PAGE)

## COMPLEX SAFETY BRIEFING (CONT)

- |     |   |            |       |
|-----|---|------------|-------|
| 6.  | FIRE FIGHTING EQUIPMENT   |            |       |
| A.  | OPERATION PROFICIENCY   | DETERMINED | _____ |
| B.  | LOCATION AND STATUS   | BRIEFED    | _____ |
| 7.  | CLOTHING AND EQUIPMENT  |            |       |
| A.  | HARD HATS   | BRIEFED    | _____ |
| B.  | RINGS, WATCHES, LIGHTERS,<br>MATCHES, AND LOOSE ARTICLES                          | BRIEFED    | _____ |
| C.  | DESIGNATED SMOKING AREA   | BRIEFED    | _____ |
| 8.  | SAFETY CAUTIONS   |            |       |
| A.  | STAIRWAYS, LADDERS AND PLATFORMS  | BRIEFED    | _____ |
| B.  | EQUIPMENT HANDLING  | BRIEFED    | _____ |
| C.  | HIGH-PRESSURE LINES, SUPER-COOLED EQUIP-<br>MENT, HIGH VOLTAGES, AND TOXIC AGENTS | BRIEFED    | _____ |
| D.  | BUDDY SYSTEM (SAFETY)   | BRIEFED    | _____ |
| E.  | BLAST DOORS (NA OSTF-2)   | BRIEFED    | _____ |
| 9.  | PERSONNEL ELEVATOR  |            |       |
| A.  | USE   | BRIEFED    | _____ |
| 10. | EMERGENCY EVACUATION  |            |       |
| A.  | SIGNALS   | BRIEFED    | _____ |
| B.  | PROCEDURES  | BRIEFED    | _____ |

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**COMPLEX SAFETY BRIEFING**


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**PRELIMINARY INSTRUCTIONS**

This checklist contains the minimum items for briefing personnel prior to their departing for any destination within the complex. This checklist is abbreviated from table 3-2, T.O. 21M-HGM16F-1.

**LAUNCH CONTROL CENTER**

- |    |   |            |       |
|----|---|------------|-------|
| 1. | BRIEFING INTRODUCTION<br>(OFFICIAL VISITORS ONLY) |            |       |
|    | A. NAME, RANK, DUTY TITLE                         | BRIEFED    | _____ |
| 2. | COMPLEX STATUS<br>(OFFICIAL VISITORS ONLY)        |            |       |
|    | A. EWO STATUS                                     | BRIEFED    | _____ |
|    | B. SILO STATUS                                    | BRIEFED    | _____ |
|    | C. MISSILE STATUS                                 | BRIEFED    | _____ |
|    | D. TASKS IN PROGRESS, PERSONNEL INVOLVED          | BRIEFED    | _____ |
| 3. | EWO ACTIONS                                       | BRIEFED    | _____ |
| 4. | LCC DEPARTURE                                     |            |       |
|    | A. REQUIREMENT                                    | DETERMINED | _____ |
| 5. | BREATHING APPARATUS                               |            |       |
|    | A. OPERATION PROFICIENCY                          | DETERMINED | _____ |
|    | B. LOCATION AND STATUS                            | BRIEFED    | _____ |
|    | C. LIMITATION                                     | BRIEFED    | _____ |
|    | D. WHEN USED                                      | BRIEFED    | _____ |

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**COMPLEX SAFETY BRIEFING (CONT)**

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## 11. CIRCULATION PROCEDURES

- |                  |         |       |
|------------------|---------|-------|
| A. CONTROL       | BRIEFED | _____ |
| B. COMMUNICATION | BRIEFED | _____ |

## 12. EMERGENCIES

- |         |         |       |
|---------|---------|-------|
| A. FIRE | BRIEFED | _____ |
|---------|---------|-------|

## 13. FIRST AID FACILITIES

- |                        |         |       |
|------------------------|---------|-------|
| A. SHOWERS AND EYEWASH | BRIEFED | _____ |
| B. FIRST AID SUPPLIES  | BRIEFED | _____ |

## 14. HAZARDOUS CONDITIONS

- |         |       |
|---------|-------|
| BRIEFED | _____ |
|---------|-------|

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**ACTIVITY COORDINATION BRIEFING**


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**PRELIMINARY INSTRUCTIONS**

This briefing shall be conducted by the sector commander or his designated representative prior to any operations or maintenance activity other than EWO launch operations. All crew, maintenance, and support personnel involved in the activity shall be present. This checklist is abbreviated from table 3-6. T.O. 21M-HGM16F-1.

**LAUNCH CONTROL CENTER**

1.	REQUIRED PERSONNEL PRESENT	VERIFIED	_____
2.	ACTIVITY AUTHORIZATION	VERIFIED	_____
3.	PERSONNEL QUALIFICATION	VERIFIED	_____
4.	CHECKLISTS/TECH DATA		
	A. AVAILABILITY	VERIFIED	_____
	B. CURRENCY	VERIFIED	_____
5.	BOI REQUIREMENTS	VERIFIED	_____
6.	TOOLS AND EQUIPMENT AVAILABILITY	VERIFIED	_____
7.	SEQUENCE OF EVENTS	REVIEWED	_____
8.	INDIVIDUAL RESPONSIBILITIES	BRIEFED	_____
9.	COORDINATION REQUIRED	BRIEFED	_____
10.	COMMUNICATION REQUIREMENTS	BRIEFED	_____

(CONTINUED ON NEXT PAGE)

## ACTIVITY COORDINATION BRIEFING (CONT)

11.	BACKOUT PROCEDURES		
	A. EMERGENCIES	BRIEFED	_____
	B. EWO	BRIEFED	_____
12.	EMERGENCY ACTIONS	BRIEFED	_____
13.	CONDITIONS AFFECTING THE TASK		
	A. WEATHER	BRIEFED	_____
	B. EQUIPMENT STATUS	BRIEFED	_____
	C. CONFIGURATION CHANGES	BRIEFED	_____
14.	CLEAN-UP REQUIREMENTS	BRIEFED	_____
15.	DOCUMENTATION REQUIREMENTS	BRIEFED	_____
16.	COMPLEX SAFETY BRIEFING	COMPLETED	_____

### COMPLEX MONITORING (LAUNCH CONTROL CENTER)

#### PRELIMINARY INSTRUCTIONS

This checklist shall be used by the launch control center monitors for verifying the status of the integrated weapon system. Continuous monitoring of all items is required. However, a specific check of all items on this checklist shall be accomplished each time there is a change in the two-man team manning the launch control console, but not to exceed once every four hours. This checklist is abbreviated from table 3-7, T.O. 21M-HGM16F-1.

#### LAUNCH CONTROL CENTER

1. AUTHENTICATION AND DECODING MATERIAL	CHECKED	_____
2. READY FOR COUNTDOWN IND	GREEN	_____
3. TARGET SELECTION	VERIFIED	_____
4. TAPE RECORDER OPERATING	CHECKED	_____
5. SSB RADIO AND LOG	CHECKED	_____
6. RESET PROGRAMMER KEY POSITION	CHECKED	_____
7. RUNNING FREQUENCY METER	60 CPS	_____
8. RUNNING VOLTAGE METER	460 VAC (+2,-8)	_____
9. GENERATOR AMMETER AC METER	CHECKED	_____
10. SILO AIR INTAKE CLOSURES OPEN	GREEN	_____
11. START AIR RECEIVER NORMAL PRESSURE IND	GREEN	_____
12. SILO AIR EXHAUST CLOSURES OPEN IND	GREEN	_____

(CONTINUED ON NEXT PAGE)

## COMPLEX MONITORING (LAUNCH CONTROL CENTER) (CONT)

13.	LCC VESTIBULE BLAST DOORS CLOSED IND	GREEN	_____
13A.	EMER WATER PUMP P-32 ON IND (NA OSTF-2)	EXTINGUISHED	_____
14.	SILO AND TUNNEL BLAST DOORS	AS REQUIRED	_____
15.	ENTRY GATE & ENTRAPMENT DOORS IND	GREEN	_____
16.	LO <sub>2</sub> TANKING PANEL VALVE SWITCHES (N-4 AND N-5 OPEN; ALL OTHERS CLOSED)	CHECKED	_____
17.	COMPLEX STATUS CHARTS	CURRENT	_____



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**PLX PREPARATION AND COORDINATION PROCEDURES**

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**PRELIMINARY INSTRUCTIONS**

This checklist is to be used in conjunction with applicable flow in preparation of the missile complex for a PLX, maintenance countdown or training launch. A double asterisk identifies steps which must be reaccomplished or verified prior to the second of two successive PLX's. This checklist is abbreviated from table 3-15, T.O. 21M-HGM16F-1.

**NOTE**

The MCCC or sector commander shall ensure that activity briefings are conducted as required.

## 1. SUPPORT ORGANIZATIONS

A. WING COMMAND POST

B. SAFETY OFFICER

C. FIRE DEPARTMENT

D. HOSPITAL

E. LES OFFICER

F. UNIT MAINTENANCE

G. MUNITIONS MAINTENANCE SQUADRON

NOTIFIED \_\_\_\_\_

(CONTINUED ON NEXT PAGE)

## PLX PREPARATION AND COORDINATION PROCEDURES (CONT)

## 2. SUPPORT EQUIPMENT

A. (DELETED)

B. MEPU

C. TELEVISION MONITORS

D. ANEMOMETER

E. BREATHING APPARATUS

F. TAPE RECORDER

G. FALL-BACK AREA TELEPHONE

DISPATCHED OR  
ON HAND**NOTE**

In conjunction with performing tasks to prepare complex for countdown, complete or verify steps 3 through 12. Steps need not be completed in sequence.

3.	TV MONITORS	OPERATING	_____
4.	ANEMOMETER	OPERATING	_____
**5.	GO <sub>2</sub> VENT BLAST CLOSURE MANUAL VALVE	OPEN-BYPASS	_____
**6.	CO <sub>2</sub> VENT FAN OPERATION	CHECKED	_____
**7.	LO <sub>2</sub> SAMPLE (AS REQUIRED)	OBTAINED	_____
**8.	FALL-BACK AREA TELEPHONE	INSTALLED	_____
**9.	TAPE RECORDER	CHECKED	_____

(CONTINUED ON NEXT PAGE)

## PLX PREPARATION AND COORDINATION PROCEDURES (CONT)

- |     |                      |                                       |       |
|-----|----------------------|---------------------------------------|-------|
| 10. | PORTABLE WATER PUMPS | CHECKED                               | _____ |
| 11. | FILL AND VENT SHAFT  | INSPECTED<br>(CLEANED IF<br>REQUIRED) | _____ |

**NOTE**

Upon completion of tasks to prepare the complex for countdown, complete or verify the following steps. Steps need not be completed in sequence.

- |       |   |              |       |
|-------|---|--------------|-------|
| 12.   | MISSILE CREW DAILY COMPLEX<br>STATUS VERIFICATION CHECKLIST | COMPLETED    | _____ |
| **13. | FLUID AND GASES<br>(MINIMUM REQUIREMENTS)                   | VERIFIED     | _____ |
| **14. | GUIDANCE ALIGNED  | ACCOMPLISHED | _____ |
| **15. | MLS CORRELATION   | ACCOMPLISHED | _____ |
| 15A.  | RESET THERMAL OVERLOAD<br>RELAYS OL-1 AND OL-2.             | ACCOMPLISHED | _____ |
| **16. | AFR 122-50 ACTIONS  | VERIFIED     | _____ |
| **17. | LO <sub>2</sub> TOPPING QUICK DISCONNECT PURGE              | ACCOMPLISHED | _____ |

**NOTE**

Countdown will not be initiated with a known malfunction which would prevent completion of the exercise. Ensure that the air conditioning, ventilation, GO<sub>2</sub> purge, GO<sub>2</sub> detection, and diesel fuel vapor detection systems are in normal operating condition.

- |       |                      |          |       |
|-------|----------------------|----------|-------|
| **18. | COMPLEX STATUS FORMS | REVIEWED | _____ |
|-------|----------------------|----------|-------|

(CONTINUED ON NEXT PAGE)

## PLX PREPARATION AND COORDINATION PROCEDURES (CONT)

**19.	SUPPORT PERSONNEL	BRIEFED	_____
**20.	NONESSENTIAL PERSONNEL	EVACUATED	_____
**21.	ENTRAPMENT DOOR KEY	IN PLACE	_____
**22.	SAFETY INSPECTION	COMPLETED	_____
**23.	LES	ENABLED	_____
**24.	PERSONNEL BRIEFING	COMPLETED	_____
**25.	CREW OPERATION BRIEFING	COMPLETED	_____
**26.	WEATHER	CHECKED	_____
**27.	SECTOR COMMAND	READY	_____
**28.	SAFETY MONITOR	READY	_____
**29.	MEPU RETRACTED AND GENERATOR OPERATING (NA TRAINING LAUNCH)	VERIFIED	_____
**30.	TAPE RECORDER	OPERATING	_____
**31.	MAINTENANCE CONTROL	CONTACTED	_____
	A. COMPLEX STATUS	VERIFIED	_____
	B. PLX PREPARATION COMPLETED	VERIFIED	_____
**32.	COMMAND POST	NOTIFIED	_____

## COUNTDOWN

PRELIMINARY INSTRUCTIONS

This checklist shall be accomplished upon receipt of proper authorization to initiate a countdown. It is based on the requirement that the complex has been placed in the proper configuration and verified to be ready for countdown. Steps shall be checked in space provided as they occur or are completed.

Immediate actions or references required for abnormal indications are provided in the left-hand column. Actions or references in the left-hand column apply to a tactical (TAC) or nontactical (N/T) countdown according to the prefix used. If not prefixed, they apply to both. Symbol **A** indicates that abort must be initiated. Where NOTE, CAUTION or WARNING appears, refer to the one that precedes the step and proceed accordingly. Number references are section numbers of T.O. 21M-HGM16F-1CL-6.

This checklist is abbreviated from procedures contained in table 3.-16, T.O. 21M-HGM16F-1

LAUNCH CONTROL CENTER

- |    |   |                                   |       |
|----|---|-----------------------------------|-------|
| 1. | <b>CONTROLLER FAST REACTION CHECKLIST</b>     | <b>ACCOMPLISHED</b>               | _____ |
| 2. | <b>PERSONNEL WARNING LIGHT</b>                | <b>ON</b>                         | _____ |
| 3. | <u>MCCC</u> "CREW REPORT"                     | ACKNOWLEDGED                      | _____ |
| 4. | <u>MCCC</u> "COUNTDOWN START ON MY MARK—MARK" | WATCH STARTED AND TIME LOGGED (Z) | _____ |

(CONTINUED ON NEXT PAGE)

## COUNTDOWN (CONT)

- |     |   |                    |
|-----|---|--------------------|
| 5.  | <u>MCCC</u> "PNEU IN<br>PHASE II" AMBER"  | ACKNOWLEDGED _____ |
| 6.  | "FUEL PRESSURE<br>RISING NORMALLY"        | ANNOUNCED _____    |
| 7.  | <u>BMAT</u> "AIRBORNE F&D<br>VALVE GREEN" | NOTED _____        |
| 8.  | "PRESS. STABILIZED<br>AT PHASE II"        | ANNOUNCED _____    |
| 9.  | POSITIVE CONTROL<br>PROCEDURES            | ACCOMPLISHED _____ |
| 10. | CONTROLLER FAST<br>REACTION CHECKLIST     | COMPLETED _____    |
| 11. | ALCO COMM PUSHBUTTON                      | DEPRESSED _____    |

**NOTE**

When relieved by BMAT proceed to  
ALCO COMM/CONTROL panel.

- |     |   |                    |
|-----|---|--------------------|
| 12. | MISSILE READY IND                       | GREEN _____        |
| 13. | <u>MCCC</u> "READY FOR<br>COMMIT GREEN" | ACKNOWLEDGED _____ |

**NOTE**

The ALCO COMM/CONTROL panel  
COMMIT SWITCH key must be rotated  
fully clockwise within 3 seconds after  
either the LCO COMMIT indicator illu-  
minates GREEN or the MCCC'S "MARK".

- |     |                  |                   |
|-----|------------------|-------------------|
| 14. | LCO COMMIT GREEN | KEY ROTATED _____ |
|-----|------------------|-------------------|

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## COUNTDOWN (CONT)

**NOTE**

When MCCC announces "POWER INTERNAL AMBER" or COMMIT IN PROGRESS indicator illuminates GREEN, return to Launch Control Console and relieve BMAT after PHASE III PRESSURES HAVE stabilized.

- |     |   |   |       |
|-----|---|---|-------|
| 15. | COMMIT IN PROGRESS GREEN                    | RETURN TO<br>LCOC                       | _____ |
| 16. | <u>MCCC</u> "MISSILE AWAY"<br>(LAUNCH ONLY) | WATCH STOPPED<br>AND TIME<br>LOGGED (Z) | _____ |
| 17. | <u>MCCC</u> "ABORT RED"<br>(NO LAUNCH)      | WATCH STOPPED<br>AND TIME<br>LOGGED (Z) | _____ |

**NOTE**

After MISSILE LIFT UP & LOCKED indicator illuminates GREEN, the EMERGENCY pushbutton is enabled after 15 seconds or by depressing the ABORT pushbutton when the ABORT indicator is illuminated RED. If boiloff valve fails to open refer to section 17 of T.O. 21M-HGM16F-1CL-6.

**CAUTION**

If the abort sequence is not initiated within 15 seconds after MISSILE LIFT UP & LOCKED indicator has illuminated GREEN, depress the EMERGENCY pushbutton.

**ABORT****PRELIMINARY INSTRUCTIONS**

This checklist shall be accomplished when an abort becomes necessary. Steps shall be checked in space provided as they occur or are completed.

Immediate actions or references for abnormal indications are provided in the left-hand column. Where NOTE, CAUTION or WARNING appears, refer to the one preceding the step and proceed accordingly. Number references are section numbers in T.O. 21M-HGM16F-1CL-6.

This checklist is abbreviated from procedures contained in table 3-17 of T.O. 21M-HGM16F-1.

**LAUNCH CONTROL CENTER****CAUTION**

A minimum of 20 PSI differential between LO<sub>2</sub> and fuel tank pressure gauges must be maintained with a full LO<sub>2</sub> load. While MLS is in lowering sequence, LO<sub>2</sub> tank pressure may be controlled only by opening and closing the boiloff valve.

**NOTE**

Monitor tank pressures throughout the abort sequence.

**NOTE**

If the LP is within 33 inches of the up and locked position, the pressurization system must be in automatic and LO<sub>2</sub> tank pressure greater than 8 PSI before lowering sequence will begin.



## ABORT (CONT)

**WARNING**

If abort sequence fails to start or LP fails to lower, if boiloff valve is closed, immediately depress EMERGENCY pushbutton. After LO<sub>2</sub> tank pressure decrease to phase II, depress AUTOMATIC pushbutton. Enable boiloff valve periodically to relieve pressure when LO<sub>2</sub> tank pressure increases to 12 PSI. Continue with this procedure until appropriate emergency checklist directs otherwise.

- |  |                    |       |
|--|--------------------|-------|
| 1. <u>MCCC</u> "ABORT START"             | TIME<br>LOGGED (Z) | _____ |
| 2. <u>MCCC</u> "ABORT EXTERNAL<br>GREEN" | NOTED              | _____ |
| 3. "PRESSURES STABILIZED<br>IN PHASE II" | ANNOUNCED          | _____ |

**CAUTION**

If LO<sub>2</sub> DRAIN COMPLETE indicator illuminates GREEN prior to 40 minutes of LO<sub>2</sub> drain, immediately depress EMERGENCY pushbutton, maintain phase II pressures, then perform a manual abort. (Refer to section 10, action 3, of T.O. 21M-HGM16F-1CL-6.)

- |   |                  |       |
|---|------------------|-------|
| 4. <u>MCCC</u> "MARK - LO <sub>2</sub> DRAIN<br>COMPLETE AMBER" | WATCH<br>STARTED | _____ |
|---|------------------|-------|

(CONTINUED ON NEXT PAGE)

## ABORT (CONT)

**NOTE**

Indication that LO<sub>2</sub> has drained off the missile bulkhead will appear as a small increase in fuel tank pressure. Notify MCCC when this increase is observed.

5. MCCC "LO<sub>2</sub> DRAIN COMPLETE GREEN" ACKNOWLEDGED \_\_\_\_\_

**NOTE**

If PNEUMATICS IN PHASE I indicator fails to illuminate GREEN, depress EMERGENCY pushbutton, adjust to phase I pressure, and return system to automatic.

6. FUEL TANK PRESSURE DECREASING TO PHASE I OBSERVED \_\_\_\_\_
7. "PRESSURES STABILIZED IN PHASE I" ANNOUNCED \_\_\_\_\_
8. MCCC "ABORT COMPLETE GREEN" NOTED \_\_\_\_\_