SECTION IV

EMERGENCY PROCEDURES

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4-1. GENERAL.

4-2. This section contains procedures to be accomplished when an emergency condition occurs during weapon system operation and alert status monitoring. The emergencies that may be encountered at the launch complex are many and varied in nature. The primary concern is to protect personnel and equipment in order to complete a countdown or maintain the complex in an alert status.

4-3. During weapon system operation, the missile and facility is considered to be in an emergency condition if a shutdown occurs (with the exception of normal shutdown at completion of all exercise). Shutdown may be manually initiated any time during weapon system operation or shutdown will be automatically initiated if equipment malfunction occurs subsequent to initiation of raise launcher phase. The missile and facility is also considered to be in an emergency condition any time a hazard indication occurs during weapon system operation or alert status monitoring.

4-3A. When a gox hazard occurs, personnel will not be allowed to enter or remain in any area where the gox content is above 35 percent except to effect the rescue of personnel. When performing appropriate gox/lox hazard functions in T.O. 21-SM68-CL-21-1, portable gox analyzer readings will be taken frequently to insure that the 35 percent level is not exceeded. Clearance to perform essential corrective or safing actions in the affected area when gox concentration is above 35 percent must be obtained from the headquarters of the using command.

4-4. If a shutdown occurs, proceed with countdown on remaining launchers before performing post shutdown procedures. If a shutdown occurs during a PLX, perform post shutdown procedures immediately. (Refer to T.O. 21-SM68-CL-24-1 or T.O. 21-SM68-CL-27-1).

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WARNING

If missile APS and HPS batteries have been activated they must be removed and discharged within 8 hours or they may rupture. In remote instances, they may pressure explode causing damage to equipment and injury to personnel. (Refer to T.O. 21-SM68-2J-10-1 or -2).

4-5. BOIL-OFF PROCEDURE.

4-6. Boil-off procedure is performed after post shutdown missile and facility safing has been accomplished and it has been verified that the launcher is in the intermediate position. However, other situations may arise that would require use of boil-off procedure. If the launcher is up and locked and LOWER LAUNCHER pushbutton on the LCC has been pressed and launcher does not lower, OSBV lox dump cannot be performed and boil-off procedure will have to be used. (Refer to T.O. 21-SM68-2J-12-2 or -5.)

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4-7. OSBV LOX DUMP.

4-8. OSBV lox dump is performed after post shutdown missile and facility safing has been accomplished and it has been verified that the launcher is up and locked. If LOWER LAUNCHER pushbutton on LCC has been pressed and launcher does not lower, OSBV lox dump cannot be performed and boil-off procedure will have to be used. Approximately 10 hours are required to dump missile lox and approximately 3 minutes are required to dump missile helium. (Refer to T.O. 21-SM68-2J-12-2 or -5.)

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Note

OSBV lox dump is performed only when launcher platform is up and locked and a shutdown is in effect. If OSBV lox dump cannot be accomplished, perform boil-off procedure immediately. If launcher is up and locked and EMERGENCY UNLOAD STAGE 1 or 2 indicator (assembly 6A2) is lighted white, press EMERGENCY UNLOAD STAGE 1 or 2 pushbutton immediately and verify green indication.

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4-9. After OSBV lox dump has been accomplished and malfunction has been corrected, perform lower launcher procedures. After launcher has been lowered, extend maintenance platforms and connect probes, recycle electrical system and PLPS, and verify that lox tanks are empty.

Note

If launcher should move during OSBV lox dump, the dump operation will be stopped automatically.

4-10. RECYCLE OF ELECTRICAL SYSTEM AND PLPS.

4-11. Recycle of electrical system and PLPS is performed after OSBV lox dump or boil-off procedure has been performed, launcher is down and locked, and probes have been connected. This procedure is provided to recycle the electrical and propellant systems out of shutdown condition. This procedure also provides for manual control of propellant system valves in the checkout mode. After recycle of electrical system and PLPS has been accomplished, verification of lox tanks empty is performed. (Refer to T.O. 21-SM68-2J-10-1 and -2; and T.O. 21-SM68-2J-12-2 and -5.)

4-12. VERIFICATION OF LOX TANKS EMPTY.

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4-13. Verification of lox tanks empty is performed to verify that the missile lox tanks are empty after OSBV lox dump or boil-off procedure has been accomplished, launcher is down and locked, probes have been connected, and recycle of electrical system and PLPS has been accomplished. (Refer to T.O. 21-SM68-2J-12-2 and -5.)

4-14. HAZARD PROCEDURES.

4-15. Hazard procedures are performed as various situations arise during weapon system operation or launch readiness monitoring. Figures 4-1 through 4-15 are guides for the MLO and are not to be used as a substitute for good judgment. Figures 4-16 through 4-30 contain procedures for power house emergency conditions.

4-16. RADAR SURVEILLANCE SYSTEM (ANTI-INTRUSION).

4-17. ALARM INDICATION.

4-18. Either failure of critical components or a moving object in the surveillance area will cause an alarm to be indicated on the annunciator panel. Since it is impossible to determine without investigating the area whether an alarm is the result of an intrusion or is caused by an equipment failure, first initiate whatever actions are necessary to protect the secured area. If the surveillance area is clear of moving objects and the system cannot be reset, maintenance is to be performed on the system using the performance tests in T.O. 31P7-2TPS39-2.

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4-19. PRIMARY POWER FAILURE.

4-20. In the event of a primary AC power failure, the battery packs supplied with the system will automatically furnish emergency power to the system components for up to 2 hours. No emergency procedures are necessary.

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4-21. JAMMING AND ANTI-JAMMING.

4-22. Attempts to jam the AN/TPS-39(V) system by any known method of electronic deception will cause an alarm indication; therefore, no anti-jamming procedures are necessary.

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HAZARD CONDITION	ALERT STATUS MONITORING	PROPELLANT LOADING PHASE	RAISE LAUNCHER PHASE	LAUNCH PHASE	LOWER LAUNCHER PHASE
Equipment terminal hydraulic fire	NO-GO: See figure 4-9.	Manual shutdown: Continue countdown on remaining launchers, then see figure 4-9.	GO: After missiles have been launched, see figure 4-9.	GO: After missiles have been launched, see figure 4-9.	NO-GO: See figure 4-9.
Equipment terminal fire	NO-GO: See figure 4-8.	Manual shutdown: Continue countdown on remaining launchers, then see figures 3-22 and 4-8.	Manual shutdown prior to vent disconnect: Continue countdown on remaining launchers, then see figures 3-22 and 4-8. Go after vent disconnect.	GO: After missiles have been launched, see figure 4-8.	NO-GO: See figure 4-8. If launcher contains missile, see figures 3-22 and 4-8
Gox hazard in missile silo	NO-GO: See figure 4-2.	Manual shutdown if above 40%: Continue countdown on remaining launchers, then see figure 4-2.	Manual shutdown prior to vent disconnect if above 40%: Continue countdown on remaining launchers, then see figure 4-2.	GO: After missiles have been launched, see figure 4-2.	NO-GO if above 40% and launcher contains missile: See figure 4-2.
Gox hazard in propellant terminal	NO-GO: See figure 4-3.	Manual shutdown if rapid rise: Continue countdown on remaining launchers, then see figure 4-3.	GO: After missiles have been launched, see figure 4-3.	GO: After missiles have been launched, see figure 4-3.	GO: After launcher is lowered, see figure 4-3.
Propellant terminal fire	NO-GO: See figure 4-7.	Manual shutdown: See figure 4-7.	GO: After missiles have been launched, see figure 4-7.	GO: After missiles have been launched, see figure 4-7.	NO-GO: See figure 4-7
Power house emergency	NO-GO: See figure 4-18.	GO: See figure 4-18.	GO: See figure 4-18.	GO: See figure 4-18.	NO-GO: See figure 4-18
Missile silo fire	NO-GO: See figure 4-6.	Manual shutdown: Continue countdown on remaining launcheers, then see figure 4-6.	Manual shutdown prior to vent disconnect: Continue countdown on remaining launchers, then see figure 4-6. Go after vent disconnect.	GO: After remaining missiles have been launched, see figure 4-6.	NO-GO: See figure 4-6

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Figure 4-1. Hazard Condition Chart (Sheet 1 of 2)

HAZARD CONDITION	ALERT STATUS MONITORING	PROPELLANT LOADING PHASE	RAISE LAUNCHER PHASE	LAUNCH PHASE	LOWER LAUNCHER PHASE
Fire in fuel terminal	NO-GO: See figure 4-11.	GO: After missiles have been launched, see figure 4-11.	GO: After missiles have been launched, see figure 4-11.	GO: After missiles have been laumched, see figure 4-11.	NO-GO: See figure 4-11.
Lox spillage in missile silo	NO-GO: See figure 4-5.	GO: After missiles have been launched, see figure 4-5. If gox content rises, refer to gox hazard in missile silo.	GO: After missiles have been launched, see figure 4-5.	GO: After missiles have been launched, see figure 4-5.	NO-GO: See figure 4-5.
Missile silo explosion	NO-GO: See figure 4-13.	See figure 4-13.	See figure 4-13.	See figure 4-13.	NO-GO: See figure 4-13.

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Figure 4-1. Hazard Condition Chart (Sheet 2 of 2)

STEP	PROCEDURE
	Note All hazard actions and procedures will be at the discretion of the MLO. All tasks preceded by an asterisk will be coordinated with the MLO.
1	MISSILE SILO GOX (LCFC).....Flashing Red Gox indicator flashes red indicating a gox hazard in the missile silo.
2	Buzzer.....Silenced The buzzer sounds indicating a hazard exists, providing the buzzer was not silenced from a prior hazard. BMAT will press PUSH TO SILENCE pushbutton on LCFC.
	Note If corrective action has not started turn applicable silo air purge switch on.
3	Corrective Action.....Started Gox indicator flashes red and white indicating that silo air conditioner is operating in purge condition.
4	MLO.....Notified Upon observing the hazard, BMAT notifies the MLO.
	Note If countdown is in progress, perform only step 5; all other times perform steps 6 thru 21.
5	Countdown.....Continued MLO will evaluate the hazard and determine if it will be feasible to continue countdown or initiate shutdown. If shutdown is initiated, perform steps 6 thru 21.

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Figure 4-2. Gox Hazard in Missile Silo (Sheet 1 of 3)

STEP	PROCEDURE
6	"Attention all personnel in launcher _____, gox hazard in missile silo. Team chief call control center immediately" (if applicable.).....Announced BMAT or MLO makes above announcement over P.A. system to alert all personnel of hazard.
7	Press HAZARD LIGHT((LCFC).....Red BMAT presses ABOVE GRD HAZARD LIGHT pushbutton indicator for affected launcher to red to indicate an unsafe condition in that launcher.
8	Press MISSILE AND FACILITY (LCFC).....Red BMAT presses MISSILE AND FACILITY pushbutton indicator to insure that a countdown will not be inadvertently started with a hazard in the launcher area.
9	Command post.....Notified MLO notifies command post of hazard and all pertinent facts, and requests assistance, if necessary.
10	Gox readout (control center).....Logged BMAT will take readings of gox content in the missile silo and propellant terminal and records them for later reference. At intervals determined by the MLO, readings will be taken to determine if gox content is rising or falling.
11	Personnel to missile silo.....Directed MLO directs personnel into missile silo to investigate and evaluate the hazard. Personnel will silence horns and report conditions to the MLO.
12	HORN SILENCER (MSAP).....Pressed
*13	Gox content (missile silo).....Reported MMT uses a portable analyzer to measure actual gox content.
*14	Condition of missile silo.....Reported

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Figure 4-2. Gox Hazard in Missile Silo (Sheet 2 of 3)

STEP	PROCEDURE
15	Maintenance.....Performed Necessary maintenance will be performed to return system to normal operation.
16	Gox alarm RESET.....Pressed After maintenance has been performed, system will be reset to normal.
17	MSAP.....Normal
18	MISSILE SILO GOX (LCFC).....Not Lighted
19	"Attention all personnel, gox hazard in launcher _____ has been corrected".....Announced BMAT or MLO will make above announcement over P.A. system after maintenance is completed and system is returned to alert status monitoring.
20	Press HAZARD LIGHT (LCFC).....Green When hazard has been corrected, BMAT will press ABOVE GRD HAZARD LIGHT pushbutton indicator to green signifying hazard has been cleared. Absence of a red indication above ground indicates hazard has been corrected and area is clear for normal operation.
21	Press MISSILE AND FACILITY (LCFC).....Green BMAT presses MISSILE AND FACILITY pushbutton to green, releasing the hold, which allows a launch countdown to be initiated.

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Figure 4-2. Gox Hazard in Missile Silo (Sheet 3 of 3)

STEP	PROCEDURE
	Note All hazard actions and procedures will be at the discretion of the MLO. All tasks preceded by an asterisk will be coordinated with MLO.
1	PROP TERM GOX (LCFC).....Flashing Red GOX indicator flashes red whenever gox content in propellant terminal is above or below limits set on the analyzer. (High gox only at VAFB).
2	Buzzer.....Silenced If buzzer was not silenced from a prior hazard, buzzer sounds indicating a hazard exists. BMAT presses PUSH TO SILENCE pushbutton on the LCFC.
3	MLO.....Notified Upon observing the hazard, BMAT notifies MLO immediately.
	Note If countdown is in progress perform only step 4; at all other times perform steps 5 thru 20.
4	Countdown.....Continued MLO will evaluate hazard and determine if it will be feasible to continue countdown. If shutdown is initiated, perform steps 5 thru 20.
5	Press HAZARD LIGHT (LCFC).....Red BMAT presses ABOVE GRD HAZARD LIGHT pushbutton indicator for affected launcher to red to indicate an unsafe condition in that launcher.
6	Press MISSILE AND FACILITY (LCFC).....Red BMAT presses MISSILE AND FACILITY pushbutton to insure that a countdown will not be inadvertently started with a hazard in launcher area.

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Figure 4-3. Gox Hazard in Propellant Terminal (Sheet 1 of 3)

STEP	PROCEDURE
7	Command post.....Notified MLO notifies command post of hazard and all pertinent facts, and requests assistance, if necessary.
8	"Attention all personnel in launcher _____, gox hazard in propellant terminal. Team chief call control center immediately." (if applicable).....Announced BMAT or MLO makes above announcement over P.A. system to alert all personnel of the hazard.
9	Gox Readout (Control Center).....Logged BMAT takes a reading of gox content in missile silo and propellant terminal and records them for later reference. At intervals determined by MLO, readings will be taken to determine if gox content is rising or falling.
10	Personnel to propellant terminal.....Directed MLO directs personnel to propellant terminal to investigate and evaluate hazard. Personnel will silence horns, make gox readings, and report conditions to MLO.
11	HORN SILENCER (PTAP).....Pressed
*12	Gox content (propellant terminal).....Reported
*13	Condition of propellant terminal.....Reported
14	Maintenance.....Performed Maintenance will be performed as necessary to return system to normal operation.
15	Gox alarm RESET.....Pressed After maintenance has been performed, system will be reset to normal.
16	PTAP.....Normal
17	PROP TERM GOX (LCFC).....Not Lighted After system is reset, PTAP and PROP TERM GOX (LCFC) will be checked for normal operation.

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Figure 4-3. Gox Hazard in Propellant Terminal (Sheet 2 of 3)

STEP	PROCEDURE
18	"Attention all personnel in launcher _____, gox hazard in propellant terminal has been corrected".....Announced BMAT or MLO makes announcement over P.A. system to inform personnel that hazard has been corrected.
19	Press HAZARD LIGHT (LCFC).....Green When hazard has been corrected, BMAT will press the ABOVE GRD HAZARD LIGHT pushbutton indicator to green signifying hazard has been cleared. Absence of a red indication above ground indicates hazard has been corrected and area is clear for normal operation.
20	Press MISSILE AND FACILITY (LCFC).....Green BMAT presses MISSILE AND FACILITY pushbutton indicator to green releasing the hold, which allows a launch countdown to be initiated.

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Figure 4-3. Gox Hazard in Propellant Terminal (Sheet 3 of 3)

STEP	PROCEDURE
	All hazard actions and procedures will be at the discretion of the MLO. All tasks preceded by an asterisk will be coordinated with MLO.
	Note If this hazard occurs during lox unloading, MLO will direct MMT to stop unloading immediately.
1	TUNNEL LOX P.T. VENT (LCFC).....Flashing Red LOX P.T. VENT indicator will flash red whenever liquid oxygen is in the vent shaft. Indicator will also flash for approximately 10 seconds when checkout power is applied or LOAD PROPELLANTS is pressed.
2	MLO.....Notified BMAT will notify the MLO upon observing LOX P.T. VENT indication.
	Note If countdown is in progress, perform only step 3; all other times perform steps 4 thru 14.
3	Countdown.....Continued MLO will evaluate hazard and determine if it will be feasible to continue the countdown. If shutdown is initiated, perform steps 4 thru 14.
4	"Attention all personnel in launcher _____, lox in propellant terminal vent. Team chief call control center." (if applicable).....Announced BMAT or MLO makes above announcement over P.A. system to alert personnel of hazard.
5	Press HAZARD LIGHT (LCFC).....Red BMAT presses ABOVE GRD HAZARD LIGHT pushbutton indicator for the affected launcher to red to indicate an unsafe condition in that launcher.

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Figure 4-4. Lox Hazard in Propellant Terminal Lox Vent (Operational Bases) (Sheet 1 of 2)

STEP	PROCEDURE
6	Press MISSILE AND FACILITY (LCFC).....Red BMAT presses MISSILE AND FACILITY pushbutton indicator to insure that a countdown will not be inadvertently started with a hazard in the launcher area.
7	Command post.....Notified MLO notifies command post of hazard and all pertinent facts, and requests assistance, if necessary.
8	Gox readout (control center).....Logged BMAT will take readings of gox content in missile silo and propellant terminal and records them for later reference. At intervals determined by the MLO, further readings will be taken to determine if gox content is rising or falling.
9	MISSILE SILO AIR PURGE.....ON BMAT places silo in 100% purge to clear silo of gox.
10	Personnel to propellant terminal.....Directed MLO directs personnel to propellant terminal to investigate and evaluate hazard.
*11	Condition of propellant terminal vent shaft.....Reported Note If shutdown was initiated, perform past shutdown procedures. If lox unloading was in progress restart of lox unloading will be at the discretion of the MLO.
12	Press HAZARD LIGHT (LCFC).....Green When hazard has been corrected, BMAT will press ABOVE GRD HAZARD LIGHT pushbutton indicator to green, signifying hazard has been cleared.
13	Press MISSILE AND FACILITY (LCFC).....Green BMAT presses MISSILE AND FACILITY pushbutton indicator to green, releasing the hold, which allows launch countdown to be initiated.

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Figure 4-4. Lox Hazard in Propellant Terminal Lox Vent (Operational Bases) (Sheet 2 of 2)

STEP	PROCEDURE
14	MISSILE SILO AIR PURGE.....OFF

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Figure 4-4. Lox Hazard in Propellant Terminal Lox Vent (Operational Bases) (Sheet 2A of 2)

STEP	PROCEDURE
	All hazard actions and procedurds will be at the descretion of the MLO.
	All steps preceded by an asterisk will be coordinated with the MLO.
1	MISSILE SILO LOX SUMP (LCFC).....Flashing Red
2	Buzzer.....Silenced
	If buzzer was not silenced from a prior hazard, the buzzer will sound indicating a hazard exists. BMAT presses PUSH TO SILENCE pushbutton on LCFC.
3	MLO.....Notified
	Upon observing hazard, BMAT will notify MLO immediately.
	WARNING
	If gross lox spillage occurs during lox unloading, MLO will direct MMT to stop unloading and immediately perform steps 14 thru 19.
4	MISSILE SILO AIR PURGE.....ON
	BMAT places missile silo in 100 percent purge to clear silo of gox. At VAFB, if purge is not automatic, accomplish as part of step 12.
	Note
	If countdown is in progress perform only step 5, all other times perform steps 6 thru 29.
5	Countdown.....Continued
	MLO will evaluate hazard and determine if it will be feasible to continue countdown. If shutdown is initiated, perform steps 6 thru 29.
6	"Attention all personnel in launcher area _____, lox spillage hazard in missile silo. Team chief call control center immediately" (if applicable).....Announced
	BMAT or MLO makes above announcement over P.A. system to alert personnel of the hazard.

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Figure 4-5. Lox Spillage in Missile Silo (Sheet 1 of 4)

STEP	PROCEDURE
7	Press HAZARD LIGHT (LCFC).....Red BMAT presses ABOVE GRD HAZARD LIGHT pushbutton indicator for the affected launcher to red to indicate an unsafe condition in that launcher.
8	Press MISSILE AND FACILITY (LCFC).....Red BMAT presses MISSILE AND FACILITY pushbutton to insure that a countdown will not be inadvertently started with a hazard in launcher area.
9	Command post.....Notified MLO notifies command post of hazard and all pertinent facts, and requests assistance if necessary.
10	Gox readout (control center).....Logged BMAT takes a reading of gox content in missile silo and propellant terminal and records for later reference. At intervals determined by the MLO, readings will be taken to determine if gox content is rising or falling.
11	Personnel to missile silo.....Directed WARNING If extreme pressure is necessary to open blast lock doors, do not attempt entry. This is an indication that gross lox spillage has occurred, resulting in pressure buildup in the launcher area.
12	HORN SILENCER (MSAP).....Pressed
*13	Condition of missile silo.....Reported Portable analyzer will be used to measure actual gox content. WARNING If gross lox spillage has occurred in the missile silo, perform steps 14 thru 19 immediately.
*14	MODE selector (assembly 6A2).....CHECKOUT MLO directs MMT or BMAT to set MODE selector on PLPS chassis to CHECKOUT.

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Figure 4-5. Lox Spillage in Missile Silo (Sheet 2 of 4)

STEP	PROCEDURE
*15	CV-3123, CV-3102, or CV-3113 main water valve (affected launcher).....Closed MLO directs EPPT to close the applicable main water valve located upstream from excess flow control valves at the entrance to blast lock of affected launcher.
*16	BATTERY LOCKOUT (A/E 24A) switch.....OFF MLO directs the BMAT or MMT to remove standby batteries off the line to insure that all electrical power is removed from the missile.
*17	IPS and AGE 28 VDC rectifier circuit breakers.....OFF MLO directs MMT or BMAT to turn off IPS and AGE 28V DC rectifier to remove all electrical power.
*18	CB1, 2, 3, and 4 (PNL 1021) (level IV, equipment terminal).....OFF MLO directs MMT or BMAT to turn off above circuit breakers to remove power from emergency lights in equipment terminal, missile silo, propellant terminal and alarm panel 1022.
*19	SWITCHGEAR FEEDER circuit breaker (affected launcher).....OFF MLO directs EPPT to turn off SWITCHGEAR FEEDER circuit breaker to remove all power to the affected launcher. WARNING Steps 20 through 22 are performed only if gross lox spillage has occurred.
20	Press LAUNCHER AIR FILTRATION BLAST VALVES OVERRIDE CONTROLS CLOSED (unaffected launchers).....Amber BMAT presses above pushbutton indicator for the unaffected launchers, forcing maximum air into the affected launcher which will partially equalize pressure on the blast lock door and aid in personnel escape.
21	Air filtration system main tunnel vent.....Covered

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Figure 4-5. Lox Spillage in Missile Silo (Sheet 3 of 4)

STEP	PROCEDURE
21 (CONT)	BMAT or any available personnel covers tunnel vent to force maximum air into affected launcher. Note After all personnel are clear of the affected area, perform step 22.
22	Press LAUNCHER AIR FILTRATION BLAST VALVES OVERRIDE CONTROLS OPEN (unaffected launchers).....Not Lighted BMAT presses above pushbutton indicator for the unaffected launchers, allowing maximum escape of air from affected launcher. WARNING Step 23 will not be accomplished until gox content is within safe limits.
23	Maintenance.....Perform
24	MSAP.....Normal
25	"Attention all personnel, lox spillage hazard in missile silo _____, has been corrected".....Announced
26	Press HAZARD LIGHT (LCFC).....Green When hazard has been corrected, BMAT will press ABOVE GRD HAZARD LIGHT pushbutton indicator to green, signifying hazard has been cleared. The absence of a red indication above ground indicates hazard has been corrected and area is clear for normal operation.
27	Press MISSILE AND FACILITY (LCFC).....Green BMAT presses MISSILE AND FACILITY pushbutton indicator to green, releasing hold, which allows a launch countdown to be initiated.
28	MISSILE SILO AIR PURGE.....OFF
29	Air filtration system main tunnel vent (if applicable).....Uncovered

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Figure 4-5. Lox Spillage in Missile Silo (Sheet 4 of 4)

STEP	PROCEDURE
	Note All hazard actions and procedures will be at the discretion of the MLO. All tasks preceded by an asterisk will be coordinated with the MLO.
1	MISSILE SILO FIRE (LCFC).....Flashing Red
2	Buzzer.....Silenced If buzzer was not silenced from a prior hazard, buzzer sounds indicating a hazard exists. BMAT presses PUSH TO SILENCE pushbutton on LCFC.
3	MLO.....Notified Upon observing hazard, BMAT will notifies MLO immediately.
4	Corrective action.....Started When corrective action starts, MISSILE SILO FIRE indicator will be flashing red and white. The FOG ON indicator will be flashing white.
	Note If corrective action has not started: (Except VAFB) Check AUTO FOG DISABLE indicator. (VAFB) Check EMERGENCY WATER OFF indicator. If indicator is amber, press to not lighted.
	Note If countdown is in progress, perform only step 5; at all other times perform steps 6 thru 26.
5	Countdown.....Continued MLO will evaluate hazard and determine if it will be feasible to continue countdown. If shutdown is initiated, perform steps 6 thru 26.

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Figure 4-6. Missile Silo Fire (Sheet 1 of 4)

STEP	PROCEDURE
6	"Attention all personnel in launcher ____, fire in missile silo. Team chief contact control center immediately" (if applicable).....Announced BMAT or MLO makes above announcement over P.A. system.
7	Command post.....Notified MLO notifies command post of hazard and all pertinent facts, and requests assistance, if necessary.
8	Press HAZARD LIGHT (LCFC).....Red BMAT presses ABOVE GRD HAZARD LIGHT pushbutton indicator for affected launcher to red to indicate an unsafe condition in that launcher.
9	Press MISSILE AND FACILITY (LCFC).....Red BMAT presses MISSILE AND FACILITY pushbutton indicator to insure that a countdown will not be inadvertently started with a hazard in launcher area.
10	(Except VAFB) Press LAUNCHER AIR FILTRATION BLAST VALVES OVERRIDE CONTROLS CLOSE (applicable launcher)....Amber BMAT checks control center alarm panel to see if the AIR FILTRATION BLAST VALVES have closed. If valves did not close, he presses the CLOSE pushbutton for applicable launcher.
11	Terminate corrective action.....Directed MLO will direct BMAT to terminate corrective action at discretion of BMAT.
12	Press AUTO FOG DISABLE.....Amber BMAT presses AUTO FOG DISABLE pushbutton indicator which lights amber and provides part of circuit which turns off fog in the missile silo.
13	FOG ON.....Pressed Note In approximately 30 seconds, FOG ON will be not lighted and MISSILE SILO FIRE will be flashing red.

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Figure 4-6. Missile Silo Fire (Sheet 2 of 4)

STEP	PROCEDURE
13 (CONT)	BMAT presses FOG ON pushbutton indicator. At this time a short delay is required for the water valve to close. After the delay, FOG ON indicator will be not lighted and MISSILE SILO FIRE indicator will flash red only. This indicates that water fog is off and corrective action has terminated. At this time BMAT will notify MLO of corrective action status.
*14	Corrective action terminated.....Reported After corrective action has been terminated and MISSILE SILO FIRE indicator is flashing red, corrective action may be restarted by pressing AUTO FOG DISABLE pushbutton indicator to not lighted.
15	Personnel to missile silo.....Directed At his discretion, MLO will direct personnel to missile silo.
16	HORN SILENCER (MSAP).....Pressed
17	MANUAL RESET (MSAP).....Pressed Note If alarm fails to silence after MANUAL RESET has been pressed, sensors have not cooled sufficiently to be reset. Repeat steps 16 and 17 until normal indication on MSAP is achieved.
*18	MSAP.....Normal Personnel at MSAP will notify MLO that fire sensors have been reset and all indications are normal.
19	MISSILE SILO FIRE (LCFC).....Not Lighted When MANUAL RESET is pressed on MSAP, MISSILE SILO FIRE indicator will be not lighted on LCFC.
*20	Condition of missile silo.....Reported Personnel will proceed with caution to missile silo to observe damage caused by the fire. Personnel will not proceed into any area that has been damaged by fire. Condition of the missile silo is reported to MLO.

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Figure 4-6. Missile Silo Fire (Sheet 3 of 4)

STEP	PROCEDURE
21	"Attention all personnel, fire in missile silo _____ has been extinguished"..... Announced BMAT or MLO will make above announcement over P.A. system to inform personnel that hazard has been corrected.
22	(Except VAFB) Press LAUNCHER AIR FILTRATION BLAST VALVES OVERRIDE CONTROLS OPEN (applicable launcher)..... Not Lighted
23	Air conditioner (AC 2012) and fans (FN 2001 and FN 2021)..... Started MLO directs personnel to start missile silo air conditioner and fans at the discretion of MMT.
*24	Maintenance..... Performed Necessary maintenance will be performed to return missile silo to normal operation.
25	Press HAZARD LIGHT (LCFC)..... Green When hazard has been corrected, BMAT will press ABOVE GRD HAZARD LIGHT pushbutton indicator to green, signifying hazard has been cleared. Absence of a red indication above ground indicates hazard has been corrected and area is clear for normal operation.
26	Press MISSILE AND FACILITY (LCFC)..... Green BMAT presses the MISSILE AND FACILITY pushbutton indicator to green, releasing the hold which allows a launch countdown to be initiated.

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Figure 4-6. Missile Silo Fire (Sheet 4 of 4)

STEP	PROCEDURE
	Note All hazard actions and procedures will be at the discretion of the MLO. All tasks preceded by an asterisk will be coordinated with the MLO.
1	PROP TERM LOX FIRE (LCFC).....Flashing Red PROP TERM LOX FIRE indicator on LCFC will light flashing red.
2	Buzzer.....Silenced If buzzer was not silenced from a prior hazard, the buzzer sounds indicating a hazard exists. BMAT presses the PUSH TO SILENCE pushbutton on LCFC.
3	MLO.....Notified BMAT notifies MLO immediately upon observing hazard.
	Note If countdown is in progress perform only step 4; all other times perform steps 5 thru 20.
4	Countdown.....Continued MLO will evaluate hazard and determine if it will be feasible to continue countdown. If shutdown is initiated, perform steps 5 thru 20.
5	Press HAZARD LIGHT (LCFC).....Red BMAT presses ABOVE GRD HAZARD LIGHT push-button indicator for the affected launcher to red to indicate an unsafe condition in that launcher.
6	Press MISSILE AND FACILITY (LCFC).....Red BMAT presses MISSILE AND FACILITY push-button indicator to insure that a countdown will not be inadvertently started with a hazard in launcher area.

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Figure 4-7. Propellant Terminal Fire (Sheet 1 of 3)

STEP	PROCEDURE
7	Command post.....Notified MLO notifies command post of hazard and all pertinent facts, and requests assistance, if necessary.
8	"Attention all personnel. Fire in propellant terminal _____. Team chief call control center immediately" (if applicable).....Announced BMAT or MLO makes above announcement over P.A. system to alert personnel of hazard.
9	(Except VAFB) Press LAUNCHER AIR FILTRATION BLAST VALVES OVERRIDE CONTROLS CLOSE (applicalbe launcher).....Amber BMAT checks control center alarm panel to see if the AIR FILTRATION BLAST VALVES have closed. If valves did not close he presses CLOSE pushbutton for the applicable launcher.
10	Personnel to propellant terminal.....Directed At his discretion, MLO directs personnel to propellant terminal.
11	HORN SILENCER (PTAP).....Pressed Personnel will not open propellant terminal door if there is any indication that fire is not out. If fire appears to be out, open propellant terminal door and proceed with caution to PTAP and press HORN SILENCE.
*12	Propellant terminal condition.....Reported Personnel will investigate and evaluate condition of propellant terminal and report findings to MLO.
13	LOX FIRE RESET (PTAP).....Pressed If no fire is present or sensors have cooled, press LOX FIRE RESET ON PTAP.
14	PTAP.....Normal

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Figure 4-7. Propellant Terminal Fire (Sheet 2 of 3)

STEP	PROCEDURE
15	PROP TERM LOX FIRE (LCFC).....Not Lighted
16	"Attention all personnel, propellant terminal _____ is now open for normal work."....Announced BMAT will make above announcement after all conditions are found to be normal.
17	(Except VAFB) Press LAUNCHER AIR FILTRATION BLAST VALVES OVERRIDE CONTROLS OPEN (applicable launcher).....Not Lighted
18	Maintenance.....Performed Maintenance will be performed as necessary to return propellant terminal to normal operation.
19	Press HAZARD LIGHT (LCFC).....Green When hazard has been corrected, BMAT will press ABOVE GRD HAZARD LIGHT pushbutton indicator to green, signifying hazard has been cleared. Absence of a red indication above gound indicates hazard has been corrected and area is clear for normal operation.
20	Press MISSILE AND FACILITY (LCFC).....Green BMAT presses MISSILE AND FACILITY pushbutton indicator to green, releasing the hold, which allows a launch countdown to be initiated.

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Figure 4-7. Propellant Terminal Fire (Sheet 3 of 3)

STEP	PROCEDURE
	All hazard actions and procedures will be at the discretion of the MLO. All tasks preceded by an asterisk will be coordinated with the MLO.
1	EQUIP TERM FIRE (LCFC).....Flashing Red FIRE indicator will flash red whenever a fire sensor has been activated by excessive heat in equipment terminal.
2	Buzzer.....Silenced If buzzer was not silenced from a prior hazard, buzzer sounds indicating a hazard exists. BMAT will press PUSH TO SILENCE pushbutton on LCFC.
3	MLO.....Notified BMAT will notify MLO immediately upon observing hazard. Note If countdown is in progress, perform only step 4; all other times perform steps 5 thru 20.
4	Countdown.....Continued MLO will evaluate hazard and determine if it will be feasible to continue countdown. If shutdown is initiated, perform steps 6 thru 20.
5	Press HAZARD LIGHT (LCFC).....Red BMAT presses ABOVE GRD HAZARD LIGHT pushbutton indicator for the affected launcher to red to indicate an unsafe condition in that launcher.
6	Press MISSILE AND FACILITY (LCFC).....Red BMAT presses MISSILE AND FACILITY pushbutton indicator to insure that a countdown will not be inadvertently started with a hazard in launcher area.

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Figure 4-8. Equipment Terminal Fire (Sheet 1 of 3)

STEP	PROCEDURE
7	"Attention all personnel in launcher _____, fire in equipment terminal. Team chief call control center immediately." (if applicable).....Announced BMAT or MLO makes above announcement to alert personnel of hazard.
8	(Except VAFB) Press LAUNCHER AIR FILTRATION BLAST VALVES OVERRIDE CONTROLS CLOSE (applicable launcher).....Amber BMAT checks control center alarm panel to see if AIR FILTRATION BLAST VALVES have closed. If valves did not close, he presses the CLOSE pushbutton for applicable launcher.
9	Command post.....,.....Notified MLO notifies command post of hazard and all pertinent facts, and requests assistance, if necessary.
10	Personnel to equipment terminal.....Directed MLO directs personnel to equipment terminal to investigate and evaluate hazard. Personnel will silence horns, if possible, and report condition of equipment terminal to MLO. After fire has been extinguished, maintenance will be performed and fire sensors reset.
11	HORN SILENCER (ETAP).....Pressed
*12	Condition of equipment terminal.....Reported
13	FIRE SENSOR RESET.....Pressed
14	ETAP.....Normal
15	EQUIP TERM FIRE (LCFC).....Not Lighted
16	"Attention all personnel, fire in equipment terminal _____has been extinguised".....Announced

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Figure 4-8. Equipment Terminal Fire (Sheet 2 of 3)

STEP	PROCEDURE
16 (CONT)	After system is reset, ETAP and FIRE indicator (LCFC) will be checked for normal indications and BMAT or MLO will make an announcement over P.A. system to inform personnel that hazard has been corrected.
17	(Except VAFB) Press LAUNCHER AIR FILTRATION BLAST VALVES OVERRIDE CONTROLS open (applicable launcher).....Not Lighted BMAT opens air filtration blast valves on control center alarm panel.
18	Maintenance.....Performed
19	Press HAZARD LIGHT (LCFC).....Green When hazard has been corrected, BMAT will press ABOVE GRD HAZARD LIGHT pushbutton indicator to green, signifying hazard has been cleared. Absence of a red indication above ground indicates hazard has been corrected and area is clear for normal operation.
20	Press MISSILE AND FACILITY (LCFC).....Green BMAT presses MISSILE AND FACILITY pushbutton indicator to green, releasing the hold, which allows a launch countdown to be initiated.

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Figure 4-8. Equipment Terminal Fire (Sheet 3 of 3)

STEP	PROCEDURE
	Note All hazard actions and procedures will be at the discretion of the MLO. All tasks preceded by an asterisk will be coordinated with the MLO.
1	EQUIP TERM HYDRAULIC FIRE (LCFC).....Flashing Red
2	Buzzer.....Silenced If buzzer was not silenced from a prior hazzard, buzzer sounds indicating a hazard exists. EMAT will press PUSH TO SILENCE pushbutton on LCFC.
3	Corrective action.....Started Hydraulic fire indicator flashes red and buzzer will sound indicating that a fire has started in the hydraulic unit on Level II of equipment terminal. When indicator flashes red and white, it indicates corrective action has started.
4	MLO.....Notified EMAT will notify MLO immediately upon observing hazard.
	Note If countdown is in progress perform only step 5; at all other times perform steps 6 thru 22.
5	Countdown.....Continued MLO will evaluate the hazard and determine if it will be feasible to continue countdown or initiate shutdown. If a shutdown is initiated, perform steps 6 thru 22.
6	"Attention all personnel in launcher _____, hydraulic fire on level II of equipment terminal. Team chief call control center immediately." (if applicable).....Announced EMAT or MLO makes above announcement over P.A. system to alert all personnel of hazard.

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Figure 4-9. Hydraulic Fire, Equipment Terminal (Sheet 1 of 4)

STEP	PROCEDURE
7	Press HAZARD LIGHT (LCFC).....Red BMAT presses ABOVE GRD HAZARD LIGHT pushbutton indicator for affected launcher to red to indicate an unsafe condition in that launcher.
8	Press MISSILE AND FACILITY (LCFC).....Red BMAT presses MISSILE AND FACILITY pushbutton indicator for the affected launcher to red to indicate an unsafe condition in that launcher.
9	Command post.....Notified MLO notifies command post of hazard and all pertinent facts, and requests assistance, if necessary.
10	(Except VAFB) Press LAUNCHER AIR FILTRATION BLAST VALVES OVERRIDE CONTROLS CLOSE (applicable launcher).....Amber BMAT checks control center alarm panel to see if AIR FILTRATION BLAST VALVES are closed. If valves did not close, he presses the CLOSE pushbutton for the applicable launcher.
11	Personnel to level II of equipment terminal.....Directed MLO directs MMT to level II to investigate and evaluate condition of hydraulic pumping unit (C-216). MMT silences alarm horn (hydraulic fire) on ETAP before proceeding to level II, and reports condition to MLO. Note If corrective action was initiated, continue with step 12. If corrective action was not initiated, MLO will direct team chief to fight fire with portable CO_2 bottles. When fire is extinguished, continue with step 12.
12	HORN SILENCER (ETAP).....Pressed

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Figure 4-9. Hydraulic Fire, Equipment Terminal (Sheet 2 of 4)

STEP	PROCEDURE
*13	Condition of A/E27A-2 (C-216).....Reported
14	Press DISCHARGE CO_2 RESET (C-216).....Not Lighted
	When the carbon dioxide has been discharged within the pumping unit the high temperature red indicator and buzzer will be deenergized and the DISCHARGE CO_2 indicator will be lighted white. Team chief presses DISCHARGE CO_2 RESET for a DISCHARGE CO_2 indicator not lighted. Carbon dioxide bottle must be recharged.
15	EQUIP TERM HYDRAULIC FIRE (LCFC).....Not Lighted
16	ETAP.....Normal
17	"Attention all personnel in launcher _____, hydraulic fire on level II of equipment terminal is extinguished".....Announced
	After system is reset, ETAP and FIRE indicator (LCFC) will be checked for normal indications and BMAT or MLO will make an announcement over P.A. system to inform personnel that hazard has been corrected.
18	(Except VAFB) Press LAUNCHER AIR FILTRATION BLAST VALVES OVERRIDE CONTROLS OPEN (applicable launcher).....Not Lighted
	BMAT opens AIR FILTRATION BLAST VALVES on control center alarm panel.
19	Press HAZARD LIGHT (LCFC).....Green
	When hazard has been corrected, BMAT will press above ground hazard light pushbutton indicator to green, signifying hazard has been cleared. Absence of a red indication above ground indicates hazard has been corrected and area is clear for normal operation.
20	Press MISSILE AND FACILITY (LCFC).....Green
	BMAT presses MISSILE AND FACILITY pushbutton indicator to green, releasing hold, which re-enables the weapon system launch countdown capability.

Figure 4-9. Hydraulic Fire, Equipment Terminal (Sheet 3 of 4)

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