STEP	PROCEDURE
21	Maintenance.....Performed
22	Pneumatic control.....Reset

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

(Pages 4-32 through 4-34, Figure 4-10 deleted.)

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	FUEL TERM FUEL FIRE (LCFC).....Flashing Red FIRE indicator flashes red whenever a fire sets off a sensor in fuel terminal.
2	Buzzer.....Silenced If the buzzer was not silenced from a prior hazard, buzzer sounds indicating a hazard exists. BMAT will press the PUSH TO SILENCE pushbutton on the LCFC.
3	Corrective action.....Started FUEL FIRE indicator on LCFC lights flashing red and white. At this time fuel terminal CO_2 system is activated.
	Note If corrective action did not start, MLO must dispatch personnel to the fuel terminal to initiate corrective action manually.
4	MLO.....Notified BMAT notifies MLO immediately upon observing hazard.
	WARNING If fueling or defueling is in progress, operations will cease immediately. Only personnel in fuel terminal will evacuate to control center. All other personnel will remain at their stations.

Figure 4-11. Fire in Fuel Terminal (Sheet 1 of 3)

STEP	PROCEDURE
5	"Attention all personnel, fire in fuel terminal. All personnel in fuel terminal evacuate to control center immediately. Team chief call control center." (if applicable).....Announced
6	Press HAZARD LIGHT (3) (LCFC).....Red BMAT presses all three ABOVE GRD HAZARD LIGHT pushbutton indicators to red, indicating entire complex is in a hazardous condition.
7	Command post.....Notified MLO notifies command post of hazard, and all pertinent facts, and requests assistance, if necessary.
8	Personnel to fuel terminal.....Directed MLO directs personnel to fuel terminal to investigate and evaluate hazard. Personnel will silence horns, reset system, and report conditions to MLO.
9	HORN SILENCER (FTAP).....Pressed Note If alarm bell fails to silence after RESET has been pressed, sensors have not cooled sufficiently to be reset. Repeat steps 9 and 10 until normal indication on FTAP is noted.
10	SENSOR RESET (FTAP).....Pressed
11	FTAP.....Normal
*12	Conditions of fuel terminal.....Reported
13	FUEL TERM FUEL FIRE (LCFC).....Not Lighted After system is reset, the FTAP and FUEL TERM FUEL FIRE (LCFC) will be checked for normal operation.

Figure 4-11. Fire in Fuel Terminal (Sheet 2 of 3)

STEP	PROCEDURE
14	"Attention all personnel, fuel terminal fuel fire has been corrected".....Announced BMAT or MLO makes announcement over the P.A. system to inform personnel that hazard has been corrected.
15	Press HAZARD LIGHT (3) (LCFC).....Green When hazard has been corrected, BMAT will press ABOVE GRD HAZARD LIGHT pushbutton indicators (3) 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.
16	Maintenance.....Performed Maintenance will be performed as necessary to return system to an alert status monitoring condition.

Figure 4-11. Fire in Fuel Terminal (Sheet 3 of 3)

(Pages 4-38 through 4-39, Figure 4-12 deleted.)

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 EXPLOSION (LCFC).....Flashing Red MISSILE SILO EXPLOSION indicator will be flashing red whenever one or more explosion detectors mounted on wall of missile silo detect an explosion. Automatic corrective/ containing action is as follows: Blast valves located in propellant terminal and tunnel entrance to applicable launcher will close; blast valves in remaining two launchers will close for 3 seconds to prevent shock waves and blast effect from reaching remote portions of complex.
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 BMAT notifies MLO immediately upon observing hazard.
4	Gox content (missile silo).....Checked BMAT visually checks remote gox indicator for affected launcher.
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 indicator to insure that a countdown will not be inadvertently started with a hazard in the launcher area.

Figure 4-13. Missile Silo Explosion (Sheet 1 of 2)

STEP	PROCEDURE
7	Command post.....Notified MLO notifies command post of hazard, and all pertinent facts, and requests assistance if necessary.
8	Personnel to missile silo tunnel entrance.....Directed Following a reasonable length of time during which no other hazard indications occur, personnel proceed to missile silo tunnel entrance upon direction of MLO.
9	HORN SILENCER (MSAP).....Pressed Alarm horns in missile silo are silenced by pressing pushbutton PB9 on MSAP.
10	RESET (MSAP).....Pressed Pressing RESET pushbutton deactivates explosion sensors in missile silo and opens all blast valves in affected launcher area.
*11	Condition of missile silo.....Reported Personnel inspect missile silo and report to MLO cause and effects of explosion encountered.
12	Press HAZARD LIGHT (LCFC).....Green BMAT presses ABOVE GRD HAZARD LIGHT pushbutton indicator to green signifying hazard has been cleared. Absence of a red indication above ground indicates that affected launcher is in a normal condition.
13	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.
14	Maintenance.....Performed Required maintenance will be performed to return weapon system to normal operation.

Figure 4-13. Missile Silo Explosion (Sheet 2 of 2)

STEP	PROCEDURE
	Note All hazard actions and procedures will be at the discretion of the MLO.
1	LOX EMPTY (LCFC).....Red LOX EMPTY red indication denotes that quantity of liquid oxygen in lox storage tank (T-201) is approximately 900 gallons or below.
2	MLO.....Notified BMAT notifies MLO of indication received on LCFC. LOX EMPTY signal, if received during a countdown, causes automatic closure of FCV-301 and/or FCV-307 and opening of FCV-302. MLO initiates a manual shutdown if LOX LOADING or LOX LOADED is not received due to a valid LOX EMPTY signal. If LOX EMPTY signal is generated by the PLPS during the first hold period, MLO must initiate RAISE LAUNCHER phase immediately.
3	Countdown.....Continued MLO will evaluate the hazard and determine if it will be feasible to continue countdown.

Figure 4-14. Lox Empty Propellant Terminal

STEP	PROCEDURE
	Note All hazard actions and procedures will be at the discretion of the MLO.
1	EQUIP TERM BATTERY POWER.....Red BATTERY POWER red indicator lights steady red indicating that first end cell of standby batteries has been activated. This indicates that 28 VDC rectifier A/E24A-4 has failed.
2	MLO.....Notified Upon observing hazard, BMAT notifies MLO immediately.
	Note If countdown is in progress and has not proceeded past first hold, perform steps 3 and 4. If countdown has progressed beyond first hold, perform only step 3.
3	Countdown.....Continued
4	Personnel to level IV of equipment terminal.....Directed
	Note Refer to Section V for malfunction isolation.
	BMAT will refer to malfunction chart to troubleshoot indication and attempt to return rectifier to proper operation.

Figure 4-15. Battery Power, Equipment Terminal

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	POWER HOUSE EMERGENCY (LCFC).....Flashing Red The POWER HOUSE EMERGENCY indicator flashes red and buzzer sounds indicating an emergency in power house. BMAT silences buzzer, notifies MLO of emergency indication, and then contacts power house to inquire as to nature of emergency. Power house will advise control center of condition.
2	Buzzer.....Silenced
3	MLO.....Notified
4	Power house.....Contacted
*5	Condition.....Reported
	Note If countdown is in progress, perform only step 6; at all other times perform steps 7 thru 14.
6	Countdown.....Continued MLO will evaluate hazard and determine if it will be feasible to continue countdown or initiate shutdown. If shutdown is initiated, perform steps 7 thru 14.
7	"Attention all personnel, emergency in the power house; standby for further instructions."....Announced Personnel are directed to power house by MLO to assist as necessary.
8	Press HAZARD LIGHT (3) (LCFC).....Red BMAT presses all three HAZARD LIGHTS pushbutton indicators indicating entire complex is in a hazardous condition.

Figure 4-16. Power House Emergency (Sheet 1 of 2)

STEP	PROCEDURE
9	Command post.....Notified MLO notifies command post of hazard, all pertinent facts, and request assistance if necessary.
10	POWER HOUSE EMERGENCY (LCFC).....Not Lighted
11	Final status.....Reported EPPT notifies the control center of final outcome of condition that caused power house emergency indication.
12	"Attention all personnel, power house emergency has been corrected".....Announced
13	Press HAZARD LIGHT (3) (LCFC).....Green When hazard has been corrected, BMAT will press the ABOVE GRD HAZARD LIGHT pushbutton indicators 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.
14	Maintenance.....Performed EPPT supervises and assists maintenance personnel in performing maintenance, if required.

Figure 4-16. Power House Emergency (Sheet 2 of 2)

STEP	PROCEDURE
	All hazard actions and procedures will be at the discretion of the MLO. This procedure outlines the steps required of the EPPT for restoring AC power to the complex in the event of loss of all AC power.
1	Locate, isolate, troubleshoot, and correct system malfunction.....Accomplished EPPT visually checks annunciator panel, switchgear, and safety devices to determine the cause of power failure.
2	Feeder circuit breakers 2 thru 5.....Tripped EPPT manually trips feeder circuit breakers to isolate feeders from bus bar.
3	Fire water pumps switches.....OFF EPPT directs facility personnel to turn off fire water pumps.
4	Standby generator on the line.....Accomplished EPPT starts standby generator and connects generator to the bus.
5	Fire water jockey pump.....Started EPPT directs facility personnel to start fire water jockey pump.
6	Raw water pump.....Started EPPT directs facility personnel to start raw water pump.
7	(VAFB, EAFB, BAFB, LAFB, MHAFB) Cooling tower pumps.....Started EPPT directs facility personnel to start cooling tower pumps.

Figure 4-17. Loss of All AC Power (Sheet 1 of 3)

STEP	PROCEDURE
8	Chilled water pump.....Started EPPT directs facility personnel to start chilled water pump.
9	Hot water pump.....Started EPPT directs facility personnel to start the hot water pump.
10	Exhaust fan.....Started EPPT starts exhaust fan by closing circuit breaker and pressing START pushbutton, or by setting START switch to START.
11	(LAFB 724TH/725TH SQDN) Condenser water pump.....Started EPPT directs facility personnel to start condenser water pump.
12	Water pressure on all systems.....Checked EPPT and facility personnel visually check all water pressure systems.
13	Second diesel engine.....Started EPPT accomplishes the above by starting the diesel engine.
14	Parallel second generator.....Accomplished EPPT accomplishes the above by paralleling generator to the bus.
15	Power house intake air supply fan.....Started EPPT starts the intake fan by closing circuit breaker and setting START switch to START, or by pressing START pushbutton.
16	Water chiller.....Started EPPT directs facility personnel to start water chiller.

Figure 4-17. Loss of All AC Power (Sheet 2 of 3)

STEP	PROCEDURE
17	Post diesel engine start checkout.....Accomplished EPPT will accomplish the above by using the post diesel engine start checkout checklist.
18	Communication between the power house and control center.....Established EPPT contacts control center to report status of power house by using applicable communication net.
19	Feeder circuit breakers 2 thru 5 when directed by control center.....Closed EPPT contacts the control center to obtain status of the affected launchers before closing feeder circuit breakers.
20	Fire water pumps switches.....ON EPPT directs facility personnel to place fire water pumps HAND-OFF-AUTO switches in AUTO position.
21	All systems within the power house.....Checked EPPT and facility personnel check all systems for proper pressures, temperatures, and levels.
22	Applicable logs and forms.....Annotated

Figure 4-17. Loss of All AC Power (Sheet 3 of 3)

STEP	PROCEDURE
	All hazard actions and procedures will be at the discretion of the MLO.
	This procedure applies when it is necessary for two generators to be on the line during alert status monitoring.
1	Power house intake air supply fan . . . . . OFF
	EPPT secures intake air supply fan by setting STOP switch to STOP, or by pressing STOP pushbutton.
2	(EAFB, LAFB, MHAFB) Electrical heater hot water system. . . . . OFF
	EPPT secures electrical heater hot water system in accordance with SAC CEM 21-SM68-2-24-( ).
3	Inform control center of emergency. . . . . Accomplished
4	Standby engine. . . . . Started
	EPPT accomplishes above by starting the standby diesel engine.
5	Parallel standby generator on the line. . . . . Accomplished
	EPPT accomplishes the above by paralleling generator to the bus.
6	Power house intake air supply fan . . . . . Started
	EPPT starts intake air supply fan by setting START switch to START, or by pressing START pushbutton.
7	(EAFB, LAFB, MHAFB) Electrical heater hot water system. . . . . Started
	EPPT starts electrical heater hot water system in accordance with SAC CEM 21-SM68-2-24-( ).
8	Post diesel engine start checkout . . . . . Accomplished
	EPPT accomplishes above by using post diesel engine start checkout checklist.

Figure 4-18. Loss of One of Two Generators During Alert Status Monitoring (EAFB, BAFB, LAFB, MHAFB) (Sheet 1 of 2)

STEP	PROCEDURE
9	All systems within the power house.....Checked EPPT and facility personnel will check all systems for proper pressures, temperatures, and levels.
10	Inform control center emergency corrected.....Accomplished
11	Locate, isolate, troubleshoot, and correct system malfunction.....Accomplished EPPT accomplishes above by using portions of Section V and applicable SAC CEM manuals.
12	Applicable logs and forms.....Annotated

Figure 4-18. Loss of one of Two Generators During Alert Status Monitoring (EAFB, BAFB, LAFB, MHAFB) (Sheet 2 of 2)

STEP	PROCEDURE
	Note All hazard actions and procedures will be at the discretion of the MLO.
1	Operating water chiller STOP pushbutton.....Pressed EPPT directs facility personnel to stop operating water chiller.
2	Inform control center of emergency.....Accomplished EPPT contacts control center to report status of power house by using applicable communication net.
3	Standby engine.....Started EPPT accomplishes above by starting the standby diesel engine.
4	Parallel standby generator.....Accomplished EPPT accomplishes above by paralleling generator to the bus.
5	Water chiller START pushbutton.....Pressed EPPT directs facility personnel to start water chiller.
6	Post diesel engine start checkout.....Accomplished EPPT accomplishes above by using post diesel engine start checkout checklist.
7	All systems within the power house.....Checked EPPT and facility personnel check all systems for proper pressures, temperatures, and levels.
8	Inform control center emergency corrected.....Accomplished
9	Locate, isolate, and troubleshoot system.....Accomplished EPPT accomplishes above by using portions of Section V and applicable SAC CEM manuals.
10	Applicable forms and logs.....Annotated

Figure 4-19. Loss of One of Two Generators During Alert Status Monitoring (LAFB 724TH/725TH SQDN)

STEP	PROCEDURE
	Note All hazard actions and procedures will be at the discretion of the MLO.
1	Operating water chiller STOP pushbutton.....Pressed EPPT or facility personnel immediately stop operating water chiller by pressing STOP pushbutton.
2	Inform control center of emergency and to continue countdown.....Accomplished
3	First ice bank.....On Line EPPT directs facility personnel to place first ice bank on line.
4	Monitor chilled water temperature, ice bank water level, and add ice banks as required.....Accomplished
5	Applicable logs and forms.....Annotated

Figure 4-20. Loss of One of Three Generators During Countdown (LAFB 724TH/725TH SQDN)

STEP	PROCEDURE
	Note All hazard actions and procedures will be at the discretion of the MLO.
1	Alert signal.....Received
2	Operating water chiller STOP pushbutton.....Pressed EPPT directs facility personnel to stop operating water chiller by pressing STOP pushbutton.
3	"Power house GO to control center".....Reported EPPT will be on the communication net and after all meters have been monitored, will report power house GO to the control center.
4	First ice bank.....On Line EPPT directs facility personnel to place first ice bank on line.
5	Monitor chilled water temperature, ice bank water level, and add ice banks as required.....Accomplished

Figure 4-21. Two Generator Countdown (LAFB 724TH/725TH SQDN)

STEP	PROCEDURE
	Note All hazard actions and procedures are at the discretion of the MLO.
1	Inform control center of emergency.....Accomplished
2	Locate, isolate, troubleshoot, and correct system malfunction.....Accomplished EPPT visually checks the annunciator panel and feeder (a) safety devices to determine the cause of power failure.
	CAUTION * Do not restore power to launcher areas until directed by control center. Failure to heed this caution may result in damage to equipment.
3	Power to affected launcher areas.....Restored EPPT contacts control center to determine status of affected launcher (a) before closing launcher feeder air circuit breaker.

Figure 4-22. Loss of Launcher Feeder AC Power

STEP	PROCEDURE
	Note All hazard actions and procedures are at the discretion of the MLO.
1	Locate, isolate, troubleshoot, and correct system malfunction.....Accomplished
2	Powerhouse feeder air circuit breaker.....Closed
3	Applicable logs and forms.....Annotated

Figure 4-23. Loss of Power House Feeder AC Power

STEP	PROCEDURE
	Note All hazard actions and procedures are at the discretion of the MLO.
1	Inform control center of emergency.....Accomplished
2	Locate, isolate, troubleshoot, and correct system malfunction.....Accomplished EPPT visually checks annunciator panel and feeder safety devices to determine cause of power failure. CAUTION Do not restore power until directed by control center. Failure to heed this caution may result in damage to equipment.
3	Control center feeder air circuit breaker.....Closed EPPT contacts control center to determine status of control center before closing control center air circuit breaker.

Figure 4-24. Loss of Control Center Feeder AC Power

STEP	PROCEDURE
	Note All hazard actions and procedures are at the discretion of the MLO.
1	Inform control center of emergency.....Accomplished
2	(LAFB 724TH/725TH SQDN only) Dampers in intake air facility.....Blocked Open EPPT will accomplish above by placing blocks in intake air facility dampers to open position.
3	Locate, isolate, troubleshoot, and correct system malfunction.....Accomplished EPPT will accomplish above by using portions of Section V of this manual and applicable SAC CEM manuals.
4	(LAFB 724TH/725TH SQDN only) Blocks in dampers.....Removed EPPT will accomplish above by removing blocks from intake air facility dampers.
5	Intake fan START pushbutton.....Pressed EPPT starts intake fan by pressing START pushbutton.

Figure 4-25. Loss of Power House Intake Fan

STEP	PROCEDURE
	Note All hazard actions and procedures are at the discretion of the MLO.
1	Inform control center of emergency..... Accomplished
2	Vanes on exhaust fan..... Locked Open EPPT facility personnel accomplish the above by locking exhaust fan vanes in open position.
3	Locate, isolate, troubleshoot, and correct system malfunction..... Accomplished EPPT will accomplish the above by using portions of section V of this manual and applicable SAC CEM manuals.
4	Vanes on exhaust fan..... Unlocked EPPT facility personnel will accomplish the above by unlocking exhaust fan vanes.
5	Exhaust fan..... Started EPPT/Facility personnel start exhaust fan by closing circuit breaker and setting START switch to START or pressing START pushbutton.

Figure 4-26. Loss of Power House Exhaust Fan

STEP	PROCEDURE
	All hazard actions and procedures are at the discretion of the MLO.
1	(LAFB 724TH/725TH SQDN) Manual throttle control lever.....STOP EPPT manually places throttle control lever to stop position.
2	EMERGENCY STOP pushbutton.....Pressed EPPT manually presses EMERGENCY STOP pushbutton on engine control console and visually checks fuel control linkage to insure fuel rack is in the decreased fuel position. Note Step 3 is to be performed only if step 2 does not effect an immediate decrease in engine RPM.
3	CO_2 into air intake.....Injected As a last resort, EPPT will use an ax to chop a hole in engine intake flex duct near the turbocharger intake and inject CO_2 from a fire extinguisher. It will take a minimum of three CO_2 bottles to effect engine shutdown. WARNING If all prerequisites for stopping runaway engine are complied with an engine has not reduced speed, evacuate the power house.
4	Engine stopped.....Verified EPPT visually verifies that engine has stopped.
5	Inform control center of emergency.....Accomplished
6	Locate system malfunction.....Accomplished
7	Damage to engine and generator.....Evaluated EPPT will visually analyze extent of damage to affected equipment but will not disturb any equipment until directed by investigating personnel.

Figure 4-27. Diesel Engine Run-Away (Sheet 1 of 2)

STEP	PROCEDURE
8	Applicable logs and forms.....Annotated

Figure 4-27. Diesel Engine Run-Away (Sheet 2 of 2)

STEP	PROCEDURE
	Note All hazard actions and procedures are at the discretion of the MLO.
1	Inform control center of power house fire.....Accomplished The EPPT/facility personnel contact control center using quickest method possible.
1.1	Power house intake fan OFF.....Accomplished
2	Locate source of fire.....Accomplished EPPT/facility personnel determine what type of fire (A, B, or C) has occurred, and take immediate action to combat fire.
3	Isolate all equipment to affected area.....Accomplished EPPT/facility personnel accomplish above by isolating affected area.
4	Corrective action.....Started Control center dispatches fire control team to assist in combating fire.
5	Damage to equipment.....Evaluated EPPT/facility personnel visually analyze extent of damage to affected area/equipment but will not disturb any equipment until directed by investigating personnel.
6	Power to all operating equipment.....Restored EPPT/facility personnel restore power to any operating equipment that was not damaged by fire.
7	Control center informed of status.....Accomplished EPPT contacts control center and reports status of power house/associated equipment by using applicable communication net.
8	Applicable logs and forms.....Annotated

Figure 4-28. Power House Fire

STEP	PROCEDURE
	Note All hazard actions and procedures are at the discretion of the MLO.
1	GENERATOR and EXCITER air circuit breaker checkout.....Accomplished
2	Standby diesel engine.....Started
3	Insert synchroscope key and position to ON.....Accomplished
4	Manual field rheostat to 35 VDC.....Rotated CCW
5	Field circuit breaker.....Closed
	CAUTION Manual field rheostat must be rotated slowly to prevent damage to oncoming voltmeter.
6	Manual field rheostat full CCW.....Rotated
7	Governor motor control to 60 CPS.....Adjusted
8	Regulator preset rheostat to 2400 volts.....Adjusted
9	Generator circuit breaker.....Closed
10	Frequency and voltage.....Adjusted
11	START-RUN switch.....RUN

Figure 4-29. Single Generator Operation

STEP	PROCEDURE
	Note All hazard actions and procedures are at the discretion of the MLO.
1	Throttle control lever.....OIL
	CAUTION Hold throttle control lever as required to prevent engine from accelerating too fast when starting air valve is pulled.
2	Starting air valve.....Pulled
	Note Engine starts at approximately 450 RPM and governor takes over.
3	Throttle control lever.....RUN
4	Engine console power supply switch.....ON

Figure 4-30. Standby Diesel Engine Manual Start (LAFB 724TH/724TH SQDN)