

Table 3-15. PLX Preparation and Coordination Procedures (CONT)

STEP	REQUIREMENTS	ACTION
**27	SECTOR COMMAND	Ready. Verify and coordinate with sector command that complex and personnel are ready for countdown.
**28	SAFETY MONITOR	Ready. Verify and coordinate with safety monitor that complex is ready for countdown.
**29	MEPU	Start generator set and ensure MEPU is retracted if a PLX or maintenance countdown is to be performed. For a training launch the MEPU shall be positioned at the fallback area.
**30	TAPE RECORDER	ON.
**31	MAINTENANCE CONTROL	Contact maintenance control and verify that no outstanding discrepancies exist on complex AGE, RPIE, or missile which will prohibit the completion of the PLX or create a hazardous condition, and that all mandatory conditions for conducting a PLX have been accomplished.
**32	COMMAND POST	Notify command post that complex is ready for countdown, establish a time hack, and standby for authority to initiate countdown.

Table 3-16. Amplified Countdown Procedures

STEP	CREW POS	REQUIREMENT
1		<p>NOTE</p> <p>Normal indications shall be announced as indicated in this table. Abnormal or emergency indications shall be announced in all instances and recommendations made by responsible crew member.</p> <p>NOTE</p> <p>If guidance is on memory, target change cannot be accomplished.</p> <p>NOTE</p> <p>Emergency actions required for emergency or abnormal indications displayed on other than countdown, commit, and abort patches are contained in tables 4-2, 4-3, and 4-4.</p> <p>NOTE</p> <p>When necessary, position of the boiloff valve can be determined by panning level 3 TV camera vertically across the MEA. If B-2 pod transition fairing is above camera level, the boiloff valve is above the silo cap.</p> <p>NOTE</p> <p>The DMCCC shall announce countdown progression time at one-minute intervals. (One minute in countdown, etc.)</p>

Table 3-16. Amplified Countdown Procedures (CONT)


STEP	CREW POS	REQUIREMENT
1 (CONT)		<p style="text-align: center;">NOTE</p> <p>During countdown or abort, if a malfunction occurs which requires that the LO₂ Tanking Panels be placed in LOCAL, the READY FOR COUNTDOWN, LO₂ LINE FILLED, RAPID LO₂ LOAD, FINE LO₂ LOAD, LO₂ COMMIT and LO₂ DRAIN COMPLETE indicators on the LCC will be extinguished. The LO₂ AND FUEL indicator will illuminate red. The above indications will return to normal when the LO₂ Tanking Panels are returned to REMOTE.</p> <p style="text-align: center;">NOTE</p> <p>During a countdown, abort may be initiated by depressing ABORT pushbutton anytime prior to MISSILE LIFT UP & LOCKED indicator GREEN. After MISSILE LIFT UP & LOCKED indicator illuminates GREEN, it is not possible to initiate an abort sequence until one of the following has occurred:</p> <ol style="list-style-type: none"> a. ABORT indicator illuminated RED, which will occur if guidance does not go inertial in one second, or if engine cutoff signal is received and the missile is not away in five seconds plus the time it took for guidance to go inertial. b. Missile is away and engine cutoff signal is received. In this case, ABORT indicator will remain extinguished. c. A partial abort is automatically initiated 15 seconds after MISSILE LIFT UP & LOCKED indicator illuminates GREEN. At this time, missile power will change to external, autopilot programmer will return to safe, and commit lockup summary will drop out. <div style="text-align: center;">  <div style="border: 1px dashed black; padding: 2px; display: inline-block;">CAUTION</div> <p>Do not make radio transmissions after countdown start.</p> </div> <div style="text-align: center;"> <div style="border: 1px dashed black; padding: 2px; display: inline-block;">CAUTION</div> <p>If a malfunction requires the LO₂ Tanking Panel to be placed in LOCAL, ensure that N-5 and N-4 valve switches are in the OPEN and all other valve switches are in the CLOSED position.</p> </div> <div style="text-align: center;"> <div style="border: 2px solid black; padding: 2px; display: inline-block;">WARNING</div> <p>Prior to start of countdown, personnel shall be alerted and the silo shall be evacuated.</p> </div>

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
1 (CONT)	MCCC	<p>When 1000-cycle tone sounds, all crew members shall report to launch control center immediately.</p> <ol style="list-style-type: none"> a. <i>Take position on left side of launch control console.</i> b. <i>Accomplish controller fast reaction checklist.</i> c. <i>Ensure countdown and emergency checklists and stopwatches are available.</i> d. <i>Break seal on START C/D pushbutton.</i>
	DMCCC	<ol style="list-style-type: none"> a. <i>Take position on right side of launch control console.</i> b. <i>Accomplish controller fast reaction checklist.</i> c. <i>Ensure countdown and emergency checklists and stopwatches are available.</i> d. <i>Position personnel warning light switch on FRCP to ON.</i>
	BMAT	<ol style="list-style-type: none"> a. <i>Lamp test LO₂ TANKING (PANEL 1 and PANEL 2) and launch control console.</i> b. <i>Take position behind MCCC.</i> c. <i>Monitor pressurization until MCCC and DMCCC have completed controller fast reaction checklist.</i>
	MFT	<ol style="list-style-type: none"> a. <i>Ensure all personnel are clear of silo and that blast doors and vent valve 600 are closed.</i> b. <i>Ensure RESET PROGRAMMER key is inserted in CSMOL and that key is in OFF position.</i> c. <i>Ensure TV monitor is on, INTENSITY switch is in LOW position and LIGHTING SYSTEM MAIN POWER switch is on.</i> d. <i>Take position in front of FRCP.</i> e. <i>Ensure FRCP indicators do not indicate a condition which will prevent countdown.</i>

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
	EPPT	<p>a. <i>Take position in front of PRCP.</i></p> <p>b. <i>Parallel diesel generators.</i></p> <p style="text-align: center;">NOTE</p> <p>A tactical countdown shall not be delayed until generators are paralleled and may be completed on one generator.</p> <p style="text-align: center;">NOTE</p> <p>DIESEL GENERATOR (D-60 or D-61) OVERSPEED, LOW LUBE OIL PRESS, HI TEMP indicator on FRCP will illuminate RED for less than eight seconds when alternate generator is started.</p>
2	MCCC	Verify all crew members and equipment are ready for countdown. Crew members shall respond in the following manner and sequence, to MCCC announcement, "CREW REPORT".
	DMCCC	"DEPUTY READY".
	BMAT	"A-1 READY".
	MFT	"M-1 READY".
	EPPT	<p style="text-align: center;">NOTE</p> <p>EPPT shall respond in accordance with step a, b, or c, depending on condition of generators.</p> <p>a. "L-1 READY, GENERATOR PARALLELED".</p> <p>b. "L-1 READY, GENERATOR BEING PARALLELED".</p> <p>c. "L-1 READY, COUNTDOWN ON ONE GENERATOR".</p>
3	MCCC	<p>When ready for countdown:</p> <p>a. Announce, "COUNTDOWN START ON MY MARK-MARK" and depress START C/D pushbutton at MARK announcement.</p>

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
3 (CONT)	DMCCC	a. Start stopwatch. b. Log Zulu Time of countdown start.
	BMAT	Monitor launch control console.
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.
4	MCCC	LN ₂ LOAD indicator AMBER. Indicator illuminates AMBER when liquid nitrogen valve 214 has opened and LN ₂ load is not complete. If indicator fails to illuminate AMBER at start of countdown, abort during a nontactical countdown. During a tactical countdown, see table 4-11. Announce, "LN ₂ LOAD AMBER".
	DMCCC	Monitor tank pressures (phase 1). LO ₂ tank pressure 3.4 - 4.2 PSI. Differential pressure greater than 5 PSI. FUEL tank pressure 11.9 - 13.0 PSI.
	BMAT	Observe the following launch control console indicators, announce any abnormal indications, and advise MCCC if abort is required. (Time at which abort is initiated shall be at MCCC discretion. Refer to section V for malfunction procedures.): a. MISSILE POWER indicator AMBER to GREEN. Indicator will illuminate AMBER when countdown bus is energized and will illuminate GREEN after AC and DC buses in missile are energized from ground power system. b. HEATERS ON indicator AMBER to GREEN. Indicator will illuminate AMBER when countdown bus is energized and illuminate GREEN when engine valve heaters are energized. c. MISSILE BATTERY ACTIVATED indicator AMBER. Indicator illuminates amber when battery activate signal is sent and a 2-minute timer is started to allow the battery sufficient time to generate a full load carrying capability. d. GUIDANCE RFADY indicator AMBER. Indicator will illuminate amber when guidance countdown is initiated. Test of airborne computer and calibration of accelerometers begin.

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
4 (CONT)	BMAT (CONT)	<p>e. R/V BATTERY TEMPERATURE indicator GREEN. Indicator will illuminate green when start countdown signal to prelaunch monitor is received.</p> <p>f. AUTOPILOT ON indicator AMBER. Indicator illuminates AMBER when 400-cycle power is applied to autopilot system for gyro spin motor operation. A 4-minute timer is started to prevent initiation of autopilot test until GYROS reach proper operating speed.</p> <p>g. HYDRAULIC PRESSURE indicator AMBER. Indicator illuminates AMBER after power is applied to autopilot system and booster and sustainer hydraulic pressures are not between 1750 and 2250 PSI.</p>
	MFT	<p>Observe the following FRCP indications:</p> <p>a. GASEOUS OXYGEN VENT OPEN indicator GREEN and GASEOUS OXYGEN VENT CLOSED indicator extinguished. If vent fails to open during a tactical countdown, countdown may continue. If vent closes during a nontactical countdown prior to commit start, abort is required.</p> <p>b. GASEOUS OXYGEN VENT FAN ON indicator illuminated. If indicator fails to illuminate during a nontactical countdown, abort is required. If during a tactical countdown, countdown may continue.</p> <p>c. RPI AND FIRE FOG SYSTEM DAMPERS CLOSED indicator extinguished. If damper fails to open, countdown may continue.</p> <p>Position INTENSITY switch on TV monitor to HIGH.</p>
	EPPT	Monitor PRCP.
5	MCCC	<p>PNEUMATICS IN PHASE II indicator AMBER. Indicator will illuminate AMBER after a 5-second period for propellant level control unit (PLCU) warmup and fuel level check and if pneumatics not in phase II. If indicator fails to illuminate AMBER in approximately 5 seconds, abort is required. Refer to section V for malfunction procedures.</p> <p>Announce, "PNEUMATICS IN PHASE II AMBER".</p> <p>Acknowledge DMCCC announcement, "FUEL TANK PRESSURE RISING NORMALLY".</p>

Table 3-16. Amplified Countdown Procedures (CONT)


STEP	CREW POS	REQUIREMENT
5 (CONT)	DMCCC	<p>a. Acknowledge MCCC announcement, "PNEUMATICS IN PHASE II AMBER".</p> <p>b. Observe fuel tank pressure starts to rise at a steady even rate. With a normal rate of increase, fuel pressure tank should reach 53.0 PSI in approximately 20 seconds. If an erratic rate of increase is observed during a non-tactical countdown, abort is required. During a tactical launch, countdown may be continued, however, close observation of pressures is necessary.</p> <div style="text-align: center;">  <div style="border: 1px dashed black; padding: 2px; display: inline-block; margin-left: 10px;">CAUTION</div> </div> <p>When PRESSURE MODE indicator is illuminated GREEN and an unscheduled rapid change of pressures not within limits is observed, depress EMERGENCY pushbutton immediately. Manually correct missile tank pressures with appropriate RAISE or LOWER pushbutton, then return to automatic control by depressing AUTOMATIC pushbutton.</p> <p>c. Announce, "FUEL TANK PRESSURE RISING NORMALLY".</p> <p>d. Continue to observe missile tank pressures.</p>
	BMAT	Monitor launch control console.
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.
6	MCCC	<p>HYDRAULIC PRESSURE indicator GREEN. Indicator will illuminate GREEN when power is applied to the autopilot system and booster and sustainer hydraulic pressure are between 1750 and 2250 PSI. If indicator fails to illuminate GREEN and remain GREEN within 30 seconds after illuminating AMBER abort is required during a nontactical countdown. During a tactical countdown, see table 4-12.</p> <p>Observe HYDRAULIC PRESSURE indicator GREEN.</p>
	DMCCC	Monitor fuel tank pressure increasing to phase II pressure.
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
7	MCCC	<p style="text-align: center;">CAUTION</p> <p>If PNEUMATICS IN PHASE II indicator is not GREEN prior to HELIUM LOAD indicator AMBER, depress ABORT pushbutton immediately.</p> <p>PNEUMATICS IN PHASE II indicator GREEN. Indicator will illuminate GREEN when fuel tank pressure is between 53.0 and 67.5 PSI.</p> <p style="text-align: center;">CAUTION</p> <p>If AIRBORNE FILL & DRAIN VALVE indicator fails to illuminate GREEN within 10 seconds after PNEUMATICS IN PHASE II indicator illuminates GREEN, depress ABORT pushbutton immediately. Failure to comply may result in damage to load lines or possible loss of missile.</p> <p>a. Announce, "MARK-PNEUMATICS IN PHASE II GREEN".</p> <p>b. Start stopwatch and count seconds aloud until AIRBORNE FILL & DRAIN VALVE indicator is GREEN or until 10 seconds have elapsed. Continue timing for LO₂ LINE FILLED indicator GREEN or RAPID LO₂ LOAD indicator AMBER within 45 seconds.</p>
	DMCCC	Observe missile tank pressures stabilized at phase II pressures. (LO ₂ tank pressure 3.4 to 8.0 PSI, differential pressure greater than 5 PSI, fuel tank pressure 62.5 to 63.9 PSI).
	BMAT	<p>a. Acknowledge MCCC announcement, "MARK - PNEUMATICS IN PHASE II GREEN" and take position at LO₂ tanking panels.</p> <p>b. Observe AIRBORNE FILL & DRAIN VALVE indicator on LO₂ TANKING (PANEL 2) illuminates GREEN.</p> <p>c. Announce, "AIRBORNE FILL & DRAIN VALVE GREEN".</p> <p>d. Observe STORAGE TANK VENT VALVE N-5 indicator on LO₂ TANKING (PANEL 2) is illuminated AMBER.</p>
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
8	MCCC	<p>LO₂ LINE FILLED indicator AMBER. Indicator will illuminate AMBER after pneumatics ready for chilldown, LO₂ storage tank vent valve N-5 closed, and line chilldown not complete (40-second timer not picked up). If indicator fails to illuminate AMBER and STORAGE TANK VENT VALVE N-5 indicator is illuminated AMBER, continue countdown and observe LO₂ LINE FILLED indicator illuminates GREEN 40 seconds after PNEUMATICS IN PHASE II GREEN. If STORAGE TANK VENT VALVE N-5 indicator is not illuminated AMBER, abort a nontactical countdown or see table 4-13, item 1 if during a tactical countdown.</p> <p>Observe LO₂ LINE FILLED indicator, AMBER.</p> <p>Acknowledge announcements:</p> <ol style="list-style-type: none"> BMAT: "AIRBORNE FILL & DRAIN VALVE GREEN". DMCCC: "PRESSURES STABILIZED AT PHASE II". BMAT: "LO₂ TANKING PANELS NORMAL".
	DMCCC	<p>Announce, "PRESSURES STABILIZED AT PHASE II", after BMAT has announced "AIRBORNE FILL & DRAIN VALVE GREEN".</p>
		<p style="text-align: center;">NOTE</p> <p>The following is a general summarization of the events occurring during the LO₂ loading sequence.</p> <p>The LO₂ load sequence is started by the pneumatics ready for chilldown signal. LO₂ LINE FILLED indicator illuminates AMBER, a 40-second timer starts, N-5 and N-4 valves close, and L-1, L-2, N-50, N-1, and airborne fill-and-drain valves open.</p> <p>Opening of valve N-1 pressurizes the LO₂ storage tank to approximately 25 PSI, forcing LO₂ through the loading system into the missile and chilling down the loading lines. At the expiration of the 40-second timer, LO₂ LINE FILLED indicator illuminates GREEN, RAPID LO₂ LOAD indicator illuminates AMBER, and valve N-2 opens.</p> <p>Opening of valve N-2 allows the transfer pressure to the LO₂ storage tank to increase to approximately 135 PSI, which rapidly loads the missile at approximately 5500 GPM. When the 95% sensor in the missile becomes wet, RAPID LO₂ LOAD indicator illuminates GREEN, FINE LO₂ LOAD indicator illuminates AMBER, L-2 closes, and L-50 opens.</p> <p>When the 99% sensor in the missile becomes wet, FINE LO₂ LOAD indicator illuminates GREEN, L-1, airborne fill-and-drain valve, N-1, N-2, and</p>

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
8 (CONT)	BMAT	<p>N-3 (if open) close. Valves L-16 and N-60 open and a 90-second line drain timer starts. At the same time, topping continues through the booster engine turbopump by way of L-50 and L-60. When the 99.25% sensor in the missile becomes wet L-50 closes and 15 seconds later L-60 closes.</p> <p>When the 90-second timer runs out L-16 and N-60 close and the LO₂ loading lines are vented through N-80, which opens at this time for 40 seconds. As the LO₂ in the missile boils off, successive topping cycles through L-60 will continue. The LO₂ READY indicator illuminates GREEN 50 seconds after FINE LO₂ LOAD indicator is illuminated GREEN.</p> <p>Observe the following:</p> <ol style="list-style-type: none"> TOPPING TANK VENT VALVE N-4 indicator AMBER. If indicator fails to illuminate AMBER, abort is required during a nontactical countdown, or see table 4-13, item 2 if during a tactical countdown. STORGAE TANK PRESS VALVE N-1 indicator GREEN. The indicator may return to AMBER after illuminating GREEN until RAPID LO₂ LOAD indicator illuminates AMBER. If indicator fails to illuminate GREEN, at least momentarily, prior to RAPID LO₂ LOAD indicator AMBER, during a nontactical countdown abort is required. Continue a tactical countdown, however, close observation of LO₂ loading is required. RAPID LOAD VALVE L-2 indicator GREEN. If indicator fails to illuminate GREEN during a nontactical countdown, abort is required. Tactical countdown may be continued. Rapid LO₂ loading may be accomplished through fine load valve L-1. Maximum allowable hold time will be reduced 2-1/2 minutes for each minute of rapid load in excess of 3-1/2 minutes, based on a minimum of 2650 gallons of LO₂ in the topping tank. FINE LOAD VALVE L-1 indicator GREEN. Fine load valve L-1 must have been open to enable airborne fill-and-drain valve to open. If FINE LOAD VALVE L-1 indicator fails to illuminate GREEN, during a nontactical countdown abort. TOPPING TANK PRESS. VALVE N-50 indicator GREEN. If indicator fails to illuminate GREEN, abort a nontactical countdown, or see table 4-13, item 3 if during a tactical countdown. TOPPING CHILL VALVE L-60 indicator GREEN. If indicator fails to illuminate GREEN, abort is required during a nontactical countdown, or see table 4-13, item 4 if during a tactical countdown. <p>Announce, "LO₂ TANKING PANELS NORMAL".</p>
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
9	MCCC	<p>LO₂ LINE FILLED indicator GREEN. Indicator illuminates GREEN upon expiration of 40-second line chilldown timer. If indicator fails to illuminate GREEN within 45 seconds (40 seconds normal) after PNEUMATICS IN PHASE II indicator GREEN, continue countdown only if RAPID LO₂ LOAD indicator illuminates AMBER.</p> <p>a. Observe LO₂ LINE FILLED indicator GREEN.</p> <p>b. Reset stopwatch.</p>
	DMCCC	Monitor missile fuel pressure for phase II.
	BMAT	Monitor LO ₂ TANKING (PANEL 1 and PANEL 2).
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.
10	MCCC	<p>RAPID LO₂ LOAD indicator AMBER. Indicator will illuminate AMBER when 95% sensor is dry and LO₂ load signal is present. If indicator fails to illuminate AMBER within 45 seconds (40 seconds normal) after PNEUMATICS IN PHASE II indicator GREEN, abort is required.</p> <p>a. Announce, "MARK - RAPID LO₂ LOAD AMBER".</p> <p>b. Start stopwatch to time LO₂ rapid load sequence.</p> <p>c. Acknowledge BMAT announcement, "LO₂ TANKING PANELS NORMAL".</p> <div style="text-align: center; border: 1px dashed black; padding: 5px; width: fit-content; margin: 10px auto;"> CAUTION </div> <p>If the RAPID LO₂ LOAD and FINE LO₂ LOAD indicators illuminate GREEN simultaneously, abort is required since a double LO₂ sensor failure has occurred.</p>
	DMCCC	Monitor phase II pressures.

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
12	MCCC	<p>MISSILE BAT. ACTIVATED indicator GREEN. Indicator will illuminate GREEN after 2-minute battery sensing timer has picked up and battery output is within specifications. If indicator fails to illuminate GREEN, abort is required. Refer to section V for malfunction procedures.</p> <p>Observe MISSILE BAT. ACTIVATED indicator GREEN.</p>
	DMCCC	Monitor phase II pressures.
	BMAT	Monitor LO ₂ TANKING (PANEL 1 and PANEL 2).
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.
13	MCCC	<p>ENG & MISSILE POWER READY indicator GREEN. Indicator will illuminate GREEN when the following conditions exist:</p> <ol style="list-style-type: none"> Missile AC and DC loads ready. Engine valve heaters on. (Deleted) Missile battery activated and output voltage within tolerance. Engines are ready. <p>If indicator fails to illuminate GREEN, abort is required. Refer to section V for malfunction procedures.</p> <ol style="list-style-type: none"> Announce, "ENGINE AND MISSILE POWER READY GREEN". Verify validity of launch order.
	DMCCC	Verify validity of launch order.
	BMAT	Monitor LO ₂ TANKING (PANEL 1 and PANEL 2).
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
12	MCCC	<p>MISSILE BAT. ACTIVATED indicator GREEN. Indicator will illuminate GREEN after 2-minute battery sensing timer has picked up and battery output is within specifications. If indicator fails to illuminate GREEN, abort is required. Refer to section V for malfunction procedures.</p> <p>Observe MISSILE BAT. ACTIVATED indicator GREEN.</p>
	DMCCC	Monitor phase II pressures.
	BMAT	Monitor LO ₂ TANKING (PANEL 1 and PANEL 2).
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.
13	MCCC	<p>ENG & MISSILE POWER READY indicator GREEN. Indicator will illuminate GREEN when the following conditions exist:</p> <ol style="list-style-type: none"> Missile AC and DC loads ready. Engine valve heaters on. (Deleted) Missile battery activated and output voltage within tolerance. Engines are ready. <p>If indicator fails to illuminate GREEN, abort is required. Refer to section V for malfunction procedures.</p> <ol style="list-style-type: none"> Announce, "ENGINE AND MISSILE POWER READY GREEN". Verify validity of launch order.
	DMCCC	Verify validity of launch order.
	BMAT	Monitor LO ₂ TANKING (PANEL 1 and PANEL 2).
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
14	MCCC	LN ₂ LOAD indicator GREEN. Indicator will illuminate GREEN, provided rapid load valve 214 has opened, 3-minute LN ₂ load timer has timed out, and transfer pressure is greater than 75 PSI. If indicator fails to illuminate GREEN during a tactical countdown, see table 4-11. During a nontactical countdown abort is required. Refer to section V for malfunction procedures. Announce, "LN ₂ LOAD GREEN".
	DMCCC	Monitor phase II pressures.
	BMAT	Stand by to position REMOTE LOCAL switch on LO ₂ TANKING (PANEL 1) to LOCAL if required.
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.
15	MCCC	AUTOPILOT ON indicator GREEN. Indicator will illuminate GREEN provided that 400-cycle, 115 VAC, 3-phase power is available at the missile and the 4-minute autopilot test delay timer is timed out. If indicator fails to illuminate GREEN, abort is required. Refer to section V for malfunction procedures. Observe AUTOPILOT ON indicator GREEN.
	DMCCC	Monitor phase II pressures.
	BMAT	Monitor LO ₂ TANKING (PANEL 1 and PANEL 2).
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.
16		AUTOPILOT TEST indicator AMBER. Indicator will illuminate AMBER when the 4-minute autopilot test delay timer is timed out, hydraulic pressure is between 1750 and 2250 PSI, and the 90-second autopilot test timer has

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
16 (CONT)	MCCC	not timed out. If the indicator fails to illuminate AMBER, abort is required. Refer to section V for malfunction procedures. Observe AUTOPILOT TEST indicator AMBER.
	DMCCC	Monitor phase II pressures.
	BMAT	Monitor LO ₂ TANKING (PANEL 1 and PANEL 2).
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.
17		<div style="text-align: center; border: 1px dashed black; padding: 5px; width: fit-content; margin: 0 auto;">CAUTION</div> <p>During a nontactical countdown, if L-2 valve indicator fails to illuminate AMBER within 8 seconds after RAPID LO₂ LOAD indicator GREEN, immediately position REMOTE LOCAL switch on LO₂ TANKING (PANEL 1) to LOCAL and initiate abort. After LO₂ STG TNK PRESSURE indicator illuminates GREEN, position REMOTE LOCAL switch to REMOTE. LO₂ tank pressure must be carefully monitored during LO₂ drain because of the increase of drain flow if valve L-2 is open. If LO₂ tank pressure decreases to 2.0 PSI, immediately position REMOTE LOCAL switch to LOCAL. Return REMOTE LOCAL switch to REMOTE when LO₂ tank pressure stabilizes.</p> <p>During a tactical countdown, if valve L-2 fails to close, allow countdown to continue. Do not initiate commit start until an automatic topping sequence is complete, as indicated by L-60 valve indicator cycling from AMBER to GREEN and back to AMBER.</p> <p>RAPID LO₂ LOAD indicator GREEN. Indicator will illuminate GREEN when the 95% sensor is wet and LO₂ load signal is still present. RAPID LO₂ LOAD indicator should illuminate GREEN approximately 3 minutes after illuminating AMBER. In a nontactical countdown, abort will be initiated</p>

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
18 (CONT)	MCCC	a. Observe FINE LO ₂ LOAD indicator AMBER. b. Acknowledge BMAT announcement, "L-2 AMBER".
	DMCCC	Monitor phase II pressures.
	BMAT	Standby at LO ₂ TANKING (PANEL 1 and PANEL 2).
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.
19	MCCC	<div style="text-align: center; border: 1px dashed black; padding: 5px; width: fit-content; margin: 0 auto;">CAUTION</div> <p>If FINE LOAD VALVE L-1 indicator fails to illuminate AMBER within 5 seconds after FINE LO₂ LOAD indicator illuminates GREEN, position REMOTE LOCAL switch on LO₂ TANKING (PANEL 1) to LOCAL and start abort. Return REMOTE LOCAL switch on LO₂ TANKING (PANEL 1) to REMOTE when LO₂ STG TNK PRESSURE indicator illuminates GREEN and monitor abort sequence. Failure to comply may result in missile tank overflow and subsequent damage.</p> <p>FINE LO₂ LOAD indicator GREEN. Indicator will illuminate GREEN when 95% and 99% sensors are wet and LO₂ load signal is present. If indicator fails to illuminate GREEN approximately 30 seconds after RAPID LO₂ LOAD indicator has illuminated GREEN, abort is required.</p> a. Announce, MARK - FINE LO ₂ LOAD GREEN". b. Start stopwatch and count aloud up to 5 seconds or until FINE LOAD VALVE L-1 indicator AMBER. Continue timing until 120 seconds have elapsed. Announce 20 seconds, for timing RAPID TOPPING VALVE L-50 indicator to illuminate AMBER and 120 seconds for timing completion of LO ₂ line drain. c. Acknowledge BMAT announcement, "L-1 AMBER".
	DMCCC	Monitor phase II pressures.

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
22 (CONT)	DMCCC	Monitor phase II pressures.
	BMAT	Monitor LO ₂ TANKING (PANEL 1 and PANEL 2).
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.
23	MCCC	<p>HYD PNEU & LN₂ - HE READY indicator will illuminate GREEN when all of the following conditions exists:</p> <ul style="list-style-type: none"> a. Pneumatics in phase II. b. Helium control charging unit greater than 4500 PSI. c. Hydraulic pressure within limits. d. Helium load complete. e. LN₂ load complete. <p>If HYD PNEU & LN₂ - HE READY indicator fails to illuminate GREEN during a tactical countdown, see table 4-15. During a nontactical countdown, abort is required. Refer to section V for malfunction procedures.</p> <p>Announce, " HYD PNEU & LN₂ - HE READY GREEN".</p>
	DMCCC	<ul style="list-style-type: none"> a. Monitor phase II pressures. b. After controllers fast reaction checklist is completed and after being relieved at launch control console by BMAT, depress ALCO COMM push-button and proceed to ALCO COMM/CONTROL panel.
	BMAT	<div style="text-align: center; border: 1px dashed black; padding: 5px; width: fit-content; margin: 0 auto;">CAUTION</div> <p>If LO₂ STG TNK PRESSURE indicator is illuminated AMBER and DRAIN VALVE L-16 or LINE DRAIN PRESS VALVE N-60 has failed to illuminate AMBER, immediately position REMOTE LOCAL switch on LO₂ TANKING (PANEL 1) to LOCAL. After LO₂ STG TNK PRESSURE indicator illuminates GREEN, return REMOTE LOCAL switch to REMOTE. Abort a nontactical countdown. Commit a tactical countdown.</p>

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
23 (CONT)	BMAT (CONT)	<p>120 seconds after beginning of LO₂ line drain (FINE LO₂ LOAD indicator GREEN), observe the following:</p> <p>a. DRAIN VALVE L-16 indicator AMBER. If indicator fails to illuminate AMBER, see caution above.</p> <p>b. LINE DRAIN PRES VALVE N-60 indicator AMBER. If indicator fails to illuminate AMBER. See caution above.</p> <p>STORAGE TANK VENT VALVE N-5 indicator GREEN or EXTINGUISHED within 30 seconds after DRAIN VALVE L-16 indicator AMBER. If indicator remains AMBER, abort a nontactical countdown.</p> <p>d. LINE VENT VALVE N-80 indicator GREEN. Indicator should remain GREEN for approximately 40 seconds. If indicator fails to illuminate GREEN during a nontactical countdown, abort is required.</p> <p>After observing LO₂ TANKING (PANEL 1 and PANEL 2) for proper line drain indications BMAT shall relieve DMCCC at launch control console to monitor missile tank pressures and report countdown timing at 1-minute intervals.</p>
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.
24	MCCC	<p>GUIDANCE READY indicator GREEN. Indicator will illuminate GREEN when guidance countdown is complete. If indicator fails to illuminate GREEN within 13 minutes from start countdown the GUIDANCE FAIL indicator will illuminate RED, see table 4-2, item 10.</p> <p>Observe GUIDANCE READY indicator GREEN.</p>
	DMCCC	When relieved by BMAT proceed to ALCO COMM/CONTROL panel, open panel, insert key, position COMM switch to TALK, monitor countdown, and stand by for MISSILE READY indicator to illuminate GREEN.
	BMAT	Monitor phase II pressures.
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
19 (CONT)	BMAT	<p>a. Acknowledge MCCC announcement. "MARK - FINE LO₂ LOAD GREEN".</p> <p>b. Announce, "L-1 AMBER". See caution above.</p> <p>c. Observe the following:</p> <p>(1) AIRBORNE FILL & DRAIN VALVE indicator AMBER. If indicator fails to illuminate AMBER, the LO₂ line drain sequence will not start. The LO₂ READY indicator will fail to illuminate GREEN and abort will be required.</p> <p>(2) DRAIN VALVE L-16 indicator GREEN.</p> <p>(3) LINE DRAIN PRES VALVE N-60 indicator GREEN. During a tactical countdown, if indicators for valves L-16 and N-60 fail to illuminate GREEN and AIRBORNE FILL & DRAIN VALVE indicator is illuminated AMBER, LO₂ line drain shall be accomplished by:</p> <p>(a) Positioning REMOTE LOCAL switch on LO₂ TANKING (PANEL 1) to LOCAL.</p> <p>(b) Positioning L-1 valve switch to OPEN after LO₂ STG TNK PRESSURE indicator illuminates GREEN.</p> <p>(c) Waiting 2 minutes, then returning L-1 valve switch to CLOSE.</p> <p>(d) Positioning REMOTE LOCAL switch to REMOTE. Commit sequence can now be initiated.</p> <p>If indicators for valves L-16 and N-60 fail to illuminate GREEN during a nontactical countdown, abort is required.</p> <p>(4) RAPID TOPPING VALVE I-50 indicator AMBER. If indicator fails to illuminate AMBER within 20 seconds after FINE LO₂ LOAD indicator illuminates GREEN, an immediate abort is required.</p>
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.
20		<p>LO₂ READY indicator GREEN. Indicator will illuminate GREEN when 99.25% sensor has been wet, airborne fill-and-drain valve is closed, and the 50-second commit delay timer has timed out. If FINE LO₂ LOAD indicator illuminates AMBER and remains AMBER after LO₂ READY indicator</p>

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
20 (CONT)	MCCC	has illuminated GREEN, commit sequence must be started within 10 minutes or abort is required as a malfunction in the LO ₂ topping system is indicated. If LO ₂ READY indicator fails to illuminate GREEN, abort is required. Refer to section V for malfunction procedures. Announce "LO ₂ READY GREEN".
	DMCCC	Monitor phase II pressures.
	BMAT	Monitor LO ₂ TANKING (PANEL 1 and PANEL 2).
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.
21	MCCC	AUTOPILOT TEST indicator GREEN. Indicator will illuminate GREEN when the 90-second autopilot test timer times out and an autopilot fail signal is not present. If indicator fails to illuminate GREEN, abort is required. Refer to section V for malfunction procedures. Observe AUTOPILOT TEST indicator GREEN.
	DMCCC	Monitor phase II pressures.
	BMAT	Monitor LO ₂ TANKING (PANEL 1 and PANEL 2).
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.
22	MCCC	HELIUM LOAD indicator GREEN. Indicator will illuminate GREEN when missile shrouded spheres reach a pressure greater than 2950 PSI. If indicator fails to illuminate GREEN within 8 minutes after being AMBER during a tactical countdown, see table 4-14. During a nontactical countdown, abort is required. Observe HELIUM LOAD indicator GREEN.

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
25	MCCC	<p>FLIGHT CONTROL & R/V READY indicator GREEN. Indicator will illuminate GREEN when the following conditions exist:</p> <ol style="list-style-type: none"> Autopilot ready. Guidance ready. R/V ready. Target selected. <p>If FLIGHT CONTROL & R/V READY indicator fails to illuminate GREEN, abort is required. Refer to section V for malfunction procedures.</p> <p>Announce, "FLIGHT CONTROL & R/V READY GREEN".</p>
	DMCCC	Stand by at ALCO COMM/CONTROL panel for MISSILE READY indicator to illuminate GREEN.
	BMAT	Monitor phase II pressures.
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.
26	MCCC	<p>READY FOR COMMIT indicator GREEN. Indicator will illuminate GREEN when the following conditions exist:</p> <ol style="list-style-type: none"> Engine and missile power ready. Flight control and R/V ready. HYD-PNEU and LN₂-HE ready. LO₂ ready. Missile lifting system in standby. <p>If READY FOR COMMIT indicator fails to illuminate GREEN, abort is required. Refer to section V for malfunction procedures.</p> <ol style="list-style-type: none"> Announce, "READY FOR COMMIT GREEN." Acknowledge EPPT announcement of power condition. Acknowledge deputy announcement. "DEPUTY READY".

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
26 (CONT)	DMCCC	<p>MISSILE READY indicator will illuminate GREEN when READY for COMMIT indicator on launch control console illuminates GREEN.</p> <p>a. Observe MISSILE READY indicator GREEN.</p> <p>b. Acknowledge, "DEPUTY READY" when MCCC announces "READY FOR COMMIT GREEN".</p>
	BMAT	Monitor phase II pressures.
	MFT	Monitor FRCP.
	EPPT	<p>a. Acknowledge MCCC announcement, "READY FOR COMMIT GREEN."</p> <p>b. Announce power condition (single or parallel generator operation.)</p>
27		<p style="text-align: center;">NOTE</p> <p>If only one generator is operating, trip FEEDER NUMBER 3 NON-ESSENTIAL BUS CONTROL SWITCH when POWER INTERNAL indicator illuminates GREEN.</p> <p style="text-align: center;">NOTE</p> <p>During commit sequence, UTILITY WATER PRESSURE and SILO WATER CHILLER UNITS MALFUNCTION indicators may illuminate RED. This is a normal condition if FEEDER NUMBER 3 NON-ESSENTIAL BUS CONTROL SWITCH GREEN indicator is illuminated.</p> <p style="text-align: center;">CAUTION</p> <p>If wind velocity or wind gust velocity exceeds maximum allowable anemometer reading measured at a distance of 10 feet above ground, do not start commit sequence except for tactical launch. (Refer to classified supplement to this manual.) Failure to comply may result in structural damage to missile.</p> <p style="text-align: center;">WARNING</p> <p>For training launches only, missile flight safety system instrumentation and range safety shall be ready for commit sequence to start.</p> <p style="text-align: center;">NOTE</p> <p>During missile commit sequence abort may be accomplished by depressing ABORT pushbutton anytime prior to MISSILE LIFT UP & LOCKED indicator illuminating GREEN or after ABORT indicator is illuminated red.</p>

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
27 (CONT)	MCCC	<div style="text-align: center; border: 1px dashed black; padding: 5px; width: fit-content; margin: 0 auto;">CAUTION</div> <p>If a nuclear blast is detected during countdown, do not start commit sequence until blast conditions (shock wave and effect) are over.</p> <ol style="list-style-type: none"> a. Announce, "M-1, CLOSE LCC BLAST CLOSURES". b. Complete controller fast reaction checklist if launch order was received when in a hold configuration. c. Acknowledge MFT announcement, "BLAST CLOSURES CLOSED". d. Break COMMIT START key cover seal.
	DMCCC	Monitor ALCO COMM/CONTROL panel.
	BMA'T	Monitor phase II pressures.
	MFT	<ol style="list-style-type: none"> a. Acknowledge MCCC announcement, "M-1, CLOSE LCC BLAST CLOSURES". b. Depress LCC BLAST CLOSURES MANUAL OPERATION CLOSE pushbutton. c. Observe the following indications: <ol style="list-style-type: none"> (1) LCC AIR INTAKE CLOSED indicator RED. (2) LCC AIR EXHAUST CLOSED indicator RED. (3) LCC STAIRWELL AIR EXHAUST CLOSED indicator RED (NA OSTF-2). <div style="text-align: center; margin: 10px 0;">NOTE</div> <p>If the above indications are abnormal, continue countdown.</p> <ol style="list-style-type: none"> d. Announce, "BLAST CLOSURES CLOSED". e. Take position at CSMOL.
	EPPT	Monitor PRCP.

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
28	MCCC	Announce, "COMMIT START ON MY MARK... MARK" and rotate COMMIT START key.
	DMCCC	The ALCO COMM/CONTROL panel COMMIT SWITCH key must be rotated fully clockwise within 3 seconds after either LCO COMMIT indicator illuminates GREEN or MCCC "MARK" announcement. Rotate ALCO COMM/CONTROL panel COMMIT SWITCH key.
	BMAT	Monitor missile tank pressures. Reset and start stopwatch. Announce commit timing at 1-minute intervals.
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.
29	MCCC	LAUNCH ENABLED indicator GREEN. Indicator will illuminate GREEN if launch has been enabled at the command post and alternate command post, and if the ALCO COMM/CONTROL panel COMMIT SWITCH key is rotated within 3 seconds after launch control console COMMIT START key is rotated. Observe LAUNCH ENABLED indicator GREEN.
	DMCCC	Monitor ALCO COMM/CONTROL panel.
	BMAT	Monitor LO ₂ TANKING (PANEL 1 and PANEL 2).
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.
	30	

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
30 (CONT)	MCCC	<p style="text-align: center;">NOTE</p> <p>If POWER INTERNAL indicator illuminates AMBER, then extinguishes, and LO₂ COMMIT, PNEUMATICS INTERNAL, and GUIDANCE COMMIT indicators illuminate AMBER, continue countdown.</p> <p>a. Announce, "MARK - POWER INTERNAL GREEN".</p> <p>b. Start stopwatch for LO₂ COMMIT indicator to illuminate GREEN in approximately 60 seconds.</p> <p>c. Acknowledge EPPT announcement, "NONESENTIAL POWER OFF".</p>
	DMCCC	At MCCC announcement "MARK-POWER INTERNAL GREEN" or when COMMIT IN PROGRESS indicator illuminates GREEN return to launch control console and relieve BMAT after phase III pressures have stabilized.
	BMAT	<p>a. Acknowledge MCCC announcement, "MARK - POWER INTERNAL GREEN".</p> <p>b. Observe RAPID TOPPING VALVE L-50 indicator GREEN. If indicator fails to illuminate GREEN during a training launch, abort is required because of possible low head pressure at the turbopumps which may result due to improper chilldown.</p>
	MFT	Monitor FRCP.
	EPPT	<p>a. Acknowledge MCCC announcement, "MARK - POWER INTERNAL GREEN".</p> <p>b. If only one generator is operating, position FEEDER NUMBER 3 NON-ESSENTIAL BUS CONTROL SWITCH to TRIP and observe FEEDER NUMBER 3 NON-ESSENTIAL BUS CONTROL SWITCH GREEN indicator illuminates.</p> <p>c. Announce, "NONESENTIAL POWER OFF" (if accomplished).</p>
31	MCCC	<p>PNEUMATICS INTERNAL indicator AMBER. Indicator will illuminate AMBER when missile power is internal and pneumatics has been selected for phase III pressures, and pneumatics is not internal. If indicator fails to illuminate AMBER and LO₂ tank pressure is not rising, ABORT is required.</p> <p>a. Observe PNEUMATICS INTERNAL indicator AMBER.</p> <p>b. Acknowledge BMAT announcement, "LO₂ PRESSURE RISING NORMALLY".</p>

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
31 (CONT)	DMCCC	Stand by to relieve BMAT.
	BMAT	After observing RAPID TOPPING VALVE L-50 indicator illuminated GREEN: a. Observe LO ₂ tank pressure rising. b. Announce, "LO ₂ PRESSURE RISING NORMALLY". LO ₂ tank pressure may increase to approximately 20 to 30 PSI during LO ₂ COMMIT indicator illuminated AMBER. This indicates that LO ₂ commit loading is in progress. Tank pressure will decrease to normal flight pressure after rapid topping sequence is complete.
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.
32	MCCC	GUIDANCE COMMIT indicator AMBER. Indicator will illuminate AMBER when guidance is on memory, as verified by the countdown group, and is not inertial. If GUIDANCE COMMIT indicator fails to illuminate AMBER and LO ₂ COMMIT indicator fails to illuminate GREEN, abort is required. Observe GUIDANCE COMMIT indicator AMBER.
	DMCCC	Stand by to relieve BMAT.
	BMAT	Announce, "LO ₂ PRESSURE 25 PSI".
	MFT	Monitor FRCP.
	EPPT	Monitor PRCP.
	33	MCCC

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
33 (CONT)	DMCCC	Stand by to relieve BMAT.
	BMAT	Monitor phase III pressures.
	MFT	Monitor FRCP and TV.
	EPPT	Monitor PRCP.
34	MCCC	<p>PNEUMATICS INTERNAL indicator GREEN. Indicator will illuminate GREEN if pneumatics are internal after phase III pressure are attained plus 5 seconds. If indicator fails to illuminate GREEN, abort is required.</p> <p>a. Announce, "PNEUMATICS INTERNAL GREEN".</p> <p>b. Acknowledge BMAT announcement, "TANK PRESSURES STABILIZED AT PHASE III".</p>
	DMCCC	Stand by to relieve BMAT.
	BMAT	<p>a. Observe missile tank pressures stabilized at flight pressures (LO₂ tank pressure 23.0 to 29.0 PSI, differential pressure greater than 5 PSI, and fuel tank pressure 59.5 to 65.6 PSI).</p> <p>b. Acknowledge MCCC announcement "PNEUMATICS INTERNAL GREEN".</p> <p>c. Announce, "TANK PRESSURES STABILIZED AT PHASE III".</p>
	MFT	Monitor FRCP and TV.
	EPPT	Monitor PRCP.
35		<p>LO₂ COMMIT indicator GREEN. Indicator will illuminate GREEN after expiration of the 60-second missile lift commit delay timer and commit internal. The LO₂ commit signal also starts a 165-second missile lift not up and locked timer, and initiates a pulsating reset signal to the propellant utilization computer assembly which continues until abort is initiated or until missile lift off has been accomplished. If indicator fails to illuminate GREEN, abort is required.</p>

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
33 (CONT)	DMCCC	Stand by to relieve BMAT.
	BMAT	Monitor phase III pressures.
	MFT	Monitor FRCP and TV.
	EPPT	Monitor PRCP.
34	MCCC	<p>PNEUMATICS INTERNAL indicator GREEN. Indicator will illuminate GREEN if pneumatics are internal after phase III pressure are attained plus 5 seconds. If indicator fails to illuminate GREEN, abort is required.</p> <p>a. Announce, "PNEUMATICS INTERNAL GREEN".</p> <p>b. Acknowledge BMAT announcement, "TANK PRESSURES STABILIZED AT PHASE III".</p>
	DMCCC	Stand by to relieve BMAT.
	BMAT	<p>a. Observe missile tank pressures stabilized at flight pressures (LO₂ tank pressure 23.0 to 29.0 PSI, differential pressure greater than 5 PSI, and fuel tank pressure 59.5 to 65.6 PSI).</p> <p>b. Acknowledge MCCC announcement "PNEUMATICS INTERNAL GREEN".</p> <p>c. Announce, "TANK PRESSURES STABILIZED AT PHASE III".</p>
	MFT	Monitor FRCP and TV.
	EPPT	Monitor PRCP.
35		<p>LO₂ COMMIT indicator GREEN. Indicator will illuminate GREEN after expiration of the 60-second missile lift commit delay timer and commit internal. The LO₂ commit signal also starts a 165-second missile lift not up and locked timer, and initiates a pulsating reset signal to the propellant utilization computer assembly which continues until abort is initiated or until missile lift off has been accomplished. If indicator fails to illuminate GREEN, abort is required.</p>

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
35 (CONT)	MCCC	<p style="text-align: center;">CAUTION</p> <p>During launcher platform up-run, if an emergency occurs which requires launcher platform to be manually stopped and immediate down-run is not desired, position RESET PROGRAMMER key switch to ON and depress ABORT pushbutton. When down-run is desired, position RESET PROGRAMMER key switch to OFF.</p> <p>Observe LO₂ COMMIT indicator GREEN.</p>
	DMCCC	Relieve BMAT at launch control console and monitor flight pressures.
	BMAT	Monitor commit sequence.
	MFT	Prepare to monitor missile lifting sequence.
	EPPT	Monitor PRCP.
36	MCCC	<p style="text-align: center;">NOTE</p> <p>If more than 165 seconds have elapsed since LO₂ COMMIT indicator illuminated GREEN and MISSILE LIFT UP & LOCKED indicator has not illuminated GREEN, ABORT indicator will illuminate AMBER.</p> <p>MISSILE UP & LOCKED indicator AMBER. Indicator will illuminate AMBER when launcher platform is not up and locked and site is soft. If indicator does not illuminate AMBER, monitor missile lifting system on TV. If silo overhead doors are opening or open and normal missile lift is apparent, wait for MISSILE LIFT UP & LOCKED indicator GREEN and continue countdown.</p> <p>a. Announce, "MISSILE LIFT UP & LOCKED AMBER".</p> <p>b. Acknowledge MFT announcement, "CSMOL NORMAL".</p>
	DMCCC	<p>Monitor flight pressures.</p> <p style="text-align: center;">NOTE</p> <p>After PNEUMATICS INTERNAL indicator has illuminated GREEN, the pressurization RAISE and LOWER pushbuttons are ineffective unless ABORT pushbutton is depressed and ABORT EXTERNAL indicator has illuminated AMBER.</p>

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
36 (CONT)	BMAT	Monitor commit sequence.
	MFT	<p>a. Acknowledge MCCC announcement, "MISSILE LIFT UP & LOCKED AMBER".</p> <p>b. Observe the following on CSMOL:</p> <p>(1) HYDRAULIC 40 HP PUMP PRESSURE indicator GREEN.</p> <p>(2) CRIB VERTICAL LOCK indicator GREEN approximately 6 to 9 seconds after MISSILE LIFT UP & LOCKED indicator AMBER.</p> <p>(3) CRIB HORIZONTAL LOCK indicator GREEN approximately 9 to 15 seconds after MISSILE LIFT UP & LOCKED indicator AMBER</p> <p>(4) SILO DOORS OPEN indicator GREEN approximately 20 to 45 seconds after MISSILE LIFT UP & LOCKED indicator AMBER.</p> <p>(5) LAUNCHER PLATFORM CREEP DISABLED indicator extinguished simultaneously with SILO DOORS OPEN indicator GREEN.</p> <p>c. Announce, "CSMOL NORMAL".</p>
	EPPT	Monitor PRCP.
37	MCCC	<p>PROGRAMMER ARMED indicator AMBER. Indicator will illuminate AMBER with programmer armed signal present 70 seconds after missile lift commit start.</p> <p>PROGRAMMER ARMED indicator GREEN. Indicator will illuminate GREEN when flight programmer is armed.</p> <p>Observe PROGRAMMER ARMED indicator AMBER to GREEN.</p>
	DMCCC	Monitor flight pressures.
	BMAT	Monitor commit sequence.
	MFT	Monitor TV and CSMOL.
	EPPT	Monitor PRCP.

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
38	MCCC	<p>MISSILE LIFT UP & LOCKED indicator GREEN. Indicator will illuminate GREEN when missile lift is up and locked. The missile lift up and locked signal completes the commit lockup summary which starts the 15-second abort timer. If indicator does not illuminate GREEN, monitor missile lifting system on TV for missile lift motion and wait for ABORT indicator to illuminate AMBER or MISSILE LIFT FAIL indicator to illuminate RED.</p> <p style="text-align: center;">CAUTION</p> <p>If ABORT indicator illuminates AMBER, initiate abort sequence. If abort sequence is not initiated within 15 seconds after MISSILE LIFT UP & LOCKED indicator has illuminated GREEN, depress EMERGENCY pushbutton. Use nomogram (LO₂ or LN₂ as applicable) contained in section VI to determine boiloff time. Manual control of LO₂ tank pressure shall be established at the HCU. Remove missile lifting system from automatic sequence control by positioning RESET PROGRAMMER key to ON.</p> <p>Announce, "MISSILE LIFT UP & LOCKED GREEN".</p>
	DMCCC	<p style="text-align: center;">NOTE</p> <p>After MISSILE LIFT UP & LOCKED indicator has illuminated GREEN, the EMERGENCY pushbutton is enabled after 15 seconds or by depressing ABORT pushbutton after ABORT indicator illuminates RED.</p>
	BMAT	Monitor commit sequence.
	MFT	<p>a. Acknowledge MCCC announcement, "MISSILE LIFT UP & LOCKED GREEN".</p> <p>b. Observe the following indications on CSMOL:</p> <p>(1) LAUNCHER PLATFORM UP COMPLETED RUN AND LOCKED indicator GREEN.</p> <p>(2) HYDRAULIC 40 HP PUMP ON indicator WHITE.</p>
	EPPT	Monitor PRCP.

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
39	MCCC	GUIDANCE COMMIT indicator GREEN. Indicator illuminates GREEN when guidance goes on inertial, which should occur within 1 second after MISSILE LIFT UP & LOCKED indicator illuminates GREEN. Observe GUIDANCE COMMIT indicator GREEN.
	DMCCC	Monitor flight pressures.
	BMAT	Monitor commit sequence.
	MFT	Monitor TV and FRCP.
	EPPT	Monitor PRCP.
40	MCCC	ENGINE START indicator AMBER to GREEN. Indicator illuminates GREEN if the following conditions exist: a. Guidance on inertial. b. Engines not cut off. c. Abort not started d. Commit lockup. Observe ENGINE START indicator GREEN.
	DMCCC	Monitor flight pressures.
	BMAT	Monitor commit sequence.
	MFT	Monitor TV and FRCP.
	EPPT	Monitor PRCP.

Table 3-16. Amplified Countdown Procedures (CONT)

STEP	CREW POS	REQUIREMENT
41	MCCC	<p>MISSILE AWAY indicator GREEN. Indicator illuminates GREEN when missile rises 1 inch.</p> <p>a. Announce, "MISSILE AWAY" or "ABORT RED".</p> <p>b. Acknowledge EPPT announcement, "NONESENTIAL POWER ON".</p> <p>c. If nontactical launch was performed (VAFB), refer to postlaunch securing procedures contained in T.O. 21M-HGM16F-3CL-1.</p> <p>d. If a tactical launch was performed, refer to postlaunch abort procedures (tactical) contained in table 3-18.</p> <p>e. If launch was not performed, refer to abort procedures contained in table 3-17.</p> <p style="text-align: center;">NOTE</p> <p>Launch or abort report should be made to command post as soon as practical.</p>
	DMCCC	<p>a. Stop stopwatch.</p> <p>b. Log Zulu Time of missile away.</p>
	BMAT	Stand by
	MFT	Stand by
	EPPT	<p>a. Acknowledge MCCC announcement, "MISSILE AWAY" or "ABORT RED".</p> <p>b. Verify nonessential power on by observing FEEDER NUMBER 3 NON-ESSENTIAL BUS CONTROL SWITCH RED indicator is illuminated. If red indicator is not illuminated, position FEEDER NUMBER 3 NON-ESSENTIAL BUS CONTROL SWITCH to CLOSE and observe red indicator illuminates.</p> <p>c. Announce, "NONESENTIAL POWER ON".</p>