BY ORDER OF THE COMMANDER
WHITEMAN AIR FORCE BASE

WHITEMAN AIR FORCE BASE
INSTRUCTION 91-109

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Safety

B-2 DOCK OPERATIONS

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This instruction implements Air Force Policy Directive (AFPD) 91-1, *Nuclear Weapons and Systems Surety*, and provides guidance on Whiteman Air Force Base (WAFB) B-2 dock operation procedures and policies. This instruction provides information on approved technical data and specific technical orders (TO) for aircraft servicing and equipment usage. This instruction applies to all individuals that are involved with the 509th Bomb Wing (509 BW) docks approved for the B-2 aircraft, including Air National Guard (ANG), except where otherwise noted. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, Recommendation for Change of Publication. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) AFI 33-322, Records Management and information Governance Program, and disposed of IAW the Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

SUMMARY OF CHANGES

This document has been substantially revised to match current dock arrangements. Updates have been made to reflect new equipment changes in all docks, therefore this document must be completely reviewed.

1. Responsibilities.

1.1. Squadron Commander

1.1.1. Ensure facilities meet Air Force industrial environmental standards IAW AFMAN 91-203, Air Force Occupational Safety, Fire, and Health Standards, and reports deficiencies to base bioenvironmental.

1.1.2. Assumes responsibility for all facilities utilized by their organization including the real-property-installed equipment.

1.1.3. Appoints in writing, a primary and alternate Facility Manager for each facility assigned to the organization.

1.1.4. Ensures all newly assigned maintenance personnel are trained on dock/facility use/operation within 60 days of assignment.

1.2. Facility Manager

1.2.1. Acts as the commander's representative and as official contact for all work requests to the 509th Civil Engineer Squadron (509 CES).

1.2.2. Coordinates all facility actions with 509 CES.

1.2.3. Must receive initial and annual refresher facility manager training.

1.2.4. Responsible for general grounds upkeep and maintenance within their area of responsibility.

1.2.5. Track semi-annual grate and Conditioned Air Supply System (CASS) pit clean-outs.

1.2.6. Perform walk-through inspection of facilities, noting any deficiencies and/or possible hazards a minimum of every 30 days.

1.2.7. Shall accompany the fire inspector during scheduled fire protection inspections and correct any deficiencies.

1.2.8. Maintain folder containing all maintenance/repairs to each facility. This folder shall also contain the following documents:

1.2.8.1. Facility Manager Appointment letter.

1.2.8.2. Facility Manager's Handbook.

1.2.8.3. Facility Manager's log listing all requirements identified by 509 CES with the work order numbers and status.

1.2.8.4. Important Telephone Numbers.

1.2.8.5. Monthly Checklist from Whiteman Air Force Base Instruction (WAFBI) 32-2001, Fire Prevention/Protection Program.

1.2.8.6. Custodial Guide.

1.2.8.7. Self Help Guide.

1.2.8.8. Annual maintenance and periodic walk through tracking product.

1.2.8.9. Locally generated grate clean-out tracking product (if required).

2. B-2 Maintenance Facilities Cold Weather Procedures.

2.1. Cold weather door closure procedures for B-2 Hangars.

2.2. Cold Weather Advisory. When temperatures fall to 40 degrees, the 509th Maintenance Operations Center (509 MOC) will issue a Cold Weather Advisory.

2.2.1. Doors can remain open indefinitely without damage to fire suppression systems or water supply lines.

2.3. Cold Weather Warning. When temperatures fall to 33 degrees and below, 509 MOC will issue a Cold Weather Warning.

2.3.1. Every effort must be made to keep hangar doors closed during cold weather warning conditions.

2.3.2. Doors on hangars 1-14, T9, Hangar 27, Building 1 and the Low Observable (LO) facilities can remain fully open for a maximum of 4 continuous hours before potential damage and freezing can occur to fire suppression systems and water supply lines.

2.3.3. 509 MXG/CC or representative, in coordination with 509 CES/CC, is the approval authority to assume risk of damaging infrastructure if doors are required to be open in cold weather conditions. (i.e. extended weapons loading operations).

2.3.4. Doors must remain closed for 1-hour after being fully opened for 4 continuous hours to allow facility systems to warm up, except in an emergency situation.

2.3.5. Non-emergency situations requiring doors to be re-opened before the 1 hour closed time will be coordinated through the 509 MXG/CC or representative.

2.3.6. Doors opened for less than 4 continuous hours can be reopened at any time given proper amount of time has passed to allow dock/hanger to warm back up.

2.4. **T-9 Only.** Hangar doors in T-9 must remain closed as much as practical below 36 degrees due to all the wet systems in hangar, especially fire suppression cannons and sprinklers. Only open doors as long as necessary to move aircraft in or out of a maintenance facility. If multiple aircraft movements are required, shut doors and allow facility to warm up between tows.

2.5. Facility Managers. Will inform maintenance personnel of heating system limitations (i.e. heating system, for protection, is designed to shut off when hangar temperature is below 35 degrees.) and document discrepancies in hangar and facility tracker.

2.5.1. Facility managers will inform 509 CES Customer Service at 660-687-6350 immediately of any heating system malfunctions to ensure proper system operation during cold weather.

3. Motorized Hangar Doors.

3.1. General Warnings and Cautions: Air Force Manual (AFMAN) 91-203.

3.1.1. Hearing protection is required within 10ft of operating hangar doors.

3.1.2. Hangar doors shall be opened a minimum of 10ft.

3.1.3. A safety edge is incorporated on the leading edge of doors to prevent damage to equipment or personnel. Door will stop automatically when safety edge strikes any object. Do not push on safety edge or damage may result.

3.1.4. Vertical opening doors must be fully opened or a minimum of 10ft to prevent personnel injury and equipment damage. Doors may be opened less than one foot from the fully closed position to facilitate pneumatic hoses, electrical cords, etc. passing through the doorway.

3.2. Training and Document Requirements.

3.2.1. All newly assigned maintenance personnel shall attend dock familiarization training prior to operating hangar doors. Refer to AFMAN 91-203 for training documentation guidance.

3.2.2. Only qualified personnel approved by the squadron commander or designated representative will be authorized to operate the hangar doors.

3.2.3. When applicable, facility managers shall develop On the Job Training (OJT) training program for all personnel who operate electric and manual hangar doors. As a minimum, qualification training will include hangar door hazards, emergency procedures and hangar door operations.

3.2.4. When applicable, facility managers shall develop a detailed hangar door operating checklist and post checklists at each hangar door control panel to include step by step procedures, (i.e. tail doors, etc. and list the name of the building custodian).

3.2.5. AFMAN 91-203 provides minimum requirements for marking and safety operations.

3.3. Operating Procedures: Docks 1-14, Hangar 1, 27, T-9, and LO-N & S

3.3.1. Opening Hangar Doors:

3.3.1.1. Press and hold the “OPEN” button (warning horn and light will activate). The doors will activate after 5-10 second delay. Releasing the open button will cause the door to stop automatically in any position.

3.3.1.2. To restart doors, press and hold the “OPEN” button until the desired door position is achieved.

3.3.1.3. Doors will automatically stop when doors reach full open position.

3.3.2. Closing Hangar Doors:

3.3.2.1. Press and hold both “CLOSE” buttons (warning horn and light will activate). The doors will activate after a 5-10 second delay. Releasing either “CLOSE” button will cause the door to stop automatically in any position.

3.3.2.2. To restart doors, press and hold both “CLOSE” buttons.

3.3.2.3. Doors will automatically stop when doors reach full closed position.

3.3.3. Alternate Modes:

3.3.3.1. Emergency Mode (Fire Key): Keys for Docks 1-14 are controlled by 509th Aircraft Maintenance Squadron (509 AMXS) support. For Hangar 1, 27, LO-N/S, and T-9 N/S the keys are controlled by 509th Maintenance Squadron (509 MXS). Keys are used to gain quick access to hangars in the event of an emergency. Using a fire key to open hangar doors will not activate fire alarms or water system.

3.3.3.1.1. When possible, ensure security sensors are brought down prior to moving doors.

3.3.3.1.2. Insert key into lock on the outside to the center of doors.

3.3.3.1.3. Momentarily turn and remove key. All four doors alarm and lights are activated. After a 5-10 second delay all four doors will move to the full open position.

3.3.3.1.4. To stop doors at any position momentarily press the stop button located next to the key lock.

3.3.3.2. Manual Mode: Used when electrical power is interrupted or doors cannot be opened electrically. Power shall be removed from doors prior to opening clutch access panel. Do not push on safety edge of door with a vehicle. Severe damage to the safety edge will result.

3.3.3.2.1. Open clutch access panel (the panel is located inside at the center of the door).

3.3.3.2.2. Turn clutch disconnect lever. The disconnect lever may be on the side or bottom of clutch housing, depending on the particular dock. The lever is about 2 inches long and must be turned 45 degrees to disconnect clutch.

3.3.3.2.3. Push by hand only or tow door (with cable only) to desired position.

3.3.3.2.4. Re-engage clutch by turning lever back to engaged position.

3.3.3.2.5. Docks 9 & 10 Only.

3.3.3.2.5.1. Open clutch access panel (panel located inside at the center of the door).

3.3.3.2.5.2. Disconnect motor from gears by pulling lever on bottom of the motor. Visually note that gears disengage as lever is moved.

3.3.3.2.5.3. Push by hand only or tow door (with cable only) to desired position.

3.3.3.2.5.4. Re-engage by operating the control lever and re-engaging the gears.

3.3.4. Roll up doors: Hangar 1, 27, and T-9.

3.3.4.1. Opening:

3.3.4.1.1. Turn off Infrared (3IR).

3.3.4.1.2. Ensure door locks are unlatched.

3.3.4.1.3. Press “OPEN” button once, roll-up door opens to the fully open position.

3.3.4.1.4. To stop the door from opening fully, press stop button.

3.3.4.2. Closing:

3.3.4.2.1. Press and hold the “CLOSE” button until the door is closed completely, release button.

3.3.4.2.2. Release button once the door is closed to desired position.

3.3.4.3. Manual operations:

3.3.4.3.1. Disengage clutch by pulling down on rope and holding it in the down position.

3.3.4.3.2. Operate chain to desired door position.

3.3.4.3.3. Re-engage clutch by releasing rope.

4. Fire Suppression System (water only).

4.1. General Warnings and Cautions: AFMAN 91-203.

4.1.1. Fire suppression system will activate through floor, ceiling, or monitor nozzles.

4.1.2. Time permitting, ensure all personnel are evacuated prior to activation of fire suppression system.

4.1.3. Do not walk in front of nozzles, pressure could injure person under aircraft and possibly into fire.

4.1.4. Open floor access pits present hidden dangers and shall remain closed unless in use and/or closure is inhibited.

4.1.5. If possible do not obstruct or block floor nozzles with any portable equipment. Area must remain clear at all times to allow for proper fire suppression.

4.1.6. Docks 1-14 and T-9 are equipped with under wing flame detectors that can see outside of the dock's main hangar doors when opened.

4.1.6.1. The main hangar doors are equipped with door limit switches to prevent inadvertent discharge of the fire suppression system when doors are opened prior to placing the system in bypass mode. These limit switches automatically inhibit only the 4 under wing flame detectors.

4.1.6.2. **Docks 1-14.** There are two red beacons associated with the underwing detectors located below the upper beacons that are associated with the full system near the northeast and southeast corners of the docks. They will flash when the doors are opened or when the Optical system is in Bypass mode to indicate the underwing detectors that are pointed outside are inhibited.

4.1.6.3. **T-9 north.** Two red flashing beacons toward the aircraft nose, will flash when the doors are opened or when the Optical system is in Bypass mode to indicate the underwing detectors that look outside the doors are inhibited.

4.1.6.4. **T-9 south.** Two red flashing beacons toward the aircraft nose, will flash when the doors are opened or when Optical system is in Bypass mode to indicate the underwing detectors that look outside the doors are inhibited.

4.1.6.5. Turning the fire suppression system key switch to "OFF" will place the optical detection system in bypass mode, to include the under wing flame detectors in the docks, causing (Docks 1-14) six red beacons within the dock to begin flashing and one red beacon in the hallway. (T-9) Five red beacons within the dock will begin flashing to indicate the system is in bypass mode. All fire suppression systems may still activate if thermal sensing loops detect a fire.

4.1.7. Fire suppression system sensors shall be placed in bypass mode when hangar doors are open, engines, Auxiliary Power Unit (APU), and/or Aerospace Ground Equipment (AGE) will be operated inside docks/hangars. Failure to comply may result in inadvertent discharge of fire suppression system.

4.2. Operating Procedures: Docks 1-14, LO-N, and LO-S.

4.2.1. Automatic Operation:

4.2.1.1. Works by cross-zone detection, meaning two flame detectors must activate to have an fire suppression system discharge. 3IR flame detectors are located throughout the maintenance bay on the ceilings and walls.

4.2.1.2. Detection by any 3IR sensor will activate fire alarm horn and red rotating beacon throughout affected bay. (T-9, Hangar 1, and 27 will have clear beacons). Fire alarm signal is sent to the Base Fire Department for the bay affected.

4.2.1.2.1. Once a second signal is detected, a 10-second timer is activated, fire suppression system nozzles in the floor will activate when the timer reaches 0, discharging the agent.

4.2.1.3. If no fire exists and there is no flow of water, go immediately to the "GREEN ABORT" (deactivation) button, push and hold the button until relieved by Base Fire Department. If the "GREEN ABORT" button is released prior to system deactivation, the timer resets and the system will continue discharging water. Do not attempt to shut off the system.

4.2.1.3.1. Evacuate maintenance bay immediately to prevent possible injury by inadvertent discharge.

4.2.2. Manual Operation:

4.2.2.1. There are six total manually operated fire alarms, two located on each wall of the maintenance bays in the docks.

4.2.2.2. Pull on one of the six fire alarm rings. This will activate an alarm at the affected building and send a signal to the Base Fire Department.

4.2.2.3. If an actual fire exists locate the fire suppression system activation button (located inside a box next to the abort deactivation button in four locations throughout the dock). Open the fire suppression system activation box and push "RED" activation button and evacuate facility.

4.2.2.4. If no fire exists and the "RED" button has been pushed, push and hold the "GREEN" deactivation button. Do not release the "GREEN" button until a fire department official instructs you to do so. (This will not stop flow if water is already flowing)

4.2.2.5. Evacuate maintenance bay immediately to prevent possible injury by inadvertent fire suppression system discharge.

4.2.3. Cannon Fire Suppression System: T-9, H-27, and H-1

4.2.3.1. Automatic and Manual operational procedures are explained in paragraph (Para) 4.2.1.

4.2.3.2. Once fire suppression system has been activated, cannon nozzles will sweep back and forth.

4.2.4. Fire suppression system Bypass Mode (Optical Detection inhibited):

4.2.4.1. Two fire suppression system bypass keys are in each facility one key is located next to each of the two manual activation buttons near the main hangar doors.

4.2.4.2. Hangar 1 has only one bypass key. Note: It is located in the office hallway near main entrance to maintenance bay.

4.2.4.3. To place fire suppression system sensors in "Bypass Mode", turn key to "Off/Bypass" position. A strobe or rotating red beacon will indicate sensors are in "Bypass Mode".

4.2.4.4. When fire suppression system sensors are placed in "Bypass Mode", fire suppression system can only be activated manually or by the thermal sensing loops installed on the ceilings.

4.2.4.5. To arm fire suppression system sensors, turn key to "On/Normal" position. Optical Detectors are now operational and fire suppression system system is automatic.

5. Electrical Pit Power.

5.1. General Warnings and Cautions: AFMAN 91-203 and applicable TOs.

5.1.1. An electrical pit located under the aircraft provides 400 Hertz/120 Volts/3 Phase power to the aircraft.

5.1.2. During fire alarm activation electrical power automatically deactivates.

5.2. Operating Procedures: Docks 1-14, T-9, and Hangar 1.

5.2.1. Verify electrical power status by reviewing Air Force Technical Order (AFTO) Form 244, Industrial/Support Equipment Record, located in the AFTO Form 244 folder in center of dock hallway or on the equipment in the electrics room.

5.2.2. Activation:

5.2.2.1. Open electrical pit in hangar floor and remove electrical cord. Insert electrical connector into the aircraft power receptacle.

5.2.2.2. Press "ON" button in electrical pit or on electrical cable head.

5.2.2.3. Close electrical power lid.

5.2.2.4. If the electrical cord and receptacle are properly mated, a light (located either in the electrical pit or on the cable head) will illuminate and stay on when button is pushed. If not properly mated, light will go out when button is released.

5.2.2.5. Initiate normal power on procedures for the aircraft.

5.2.2.6. If the electrical power cord becomes disconnected from the receptacle prior to pressing the "OFF" button, electrical power is automatically removed from the electrical cord.

5.2.3. Deactivation:

5.2.3.1. Initiate normal shutdown procedures for the aircraft.

5.2.3.2. Press "OFF" button located in electrical pit or on electrical cord.

5.2.3.3. When system deactivates, the light (located in electrical pit or on electrical cord) will go out.

5.2.3.4. Remove electrical power cord from aircraft power receptacle.

5.2.3.5. Stow power cord in electrical pit and close electrical power lid.

6. CASS.

6.1. General Warnings and Cautions: AFMAN 91-203 and applicable TOs.

6.1.1. To prevent injury to personnel, two-person lift is required when opening CASS low point lid.

6.1.2. To prevent damage to aircraft and equipment the CASS low point pit will be inspected for evidence of water. Signs of water at or above the lower grate indicate the sump pump is not working efficiently; CASS will NOT BE USED. Notify 509 CES and/or facility manager if water is above this level.

6.1.3. To prevent injury to personnel or damage to aircraft and equipment, air adapter end of air hose shall be secured prior to activating CASS. CASS shall not be used for facility cooling.

6.1.4. To prevent injury to personnel or damage to aircraft, each CASS pit is equipped with a lanyard at the air hose connection point that will be clipped to the flange of the CASS hose when air duct is attached.

6.1.5. To prevent injury to personnel or damage to aircraft, all hoses require a pre-use inspection. Ensure all hose end clamps are secure and are not sliding off the adapter end. Check air hoses and lanyards for serviceability (cuts, holes, abrasions, deterioration, and missing parts). If any hose has a discrepancy contact an expeditor or production superintendent, for replacement hoses.

6.1.6. If any malfunction occurs a "RED" warning light will illuminate on the control panel. If reset is unsuccessful, system will be automatically shut-down. Contact CE Customer service at 660-687-6350.

6.2. Operating Procedures: Docks 1-14, T-9, and Hangar 1.

6.2.1. Primary Blower Start Up:

6.2.1.1. Connect CASS hoses to each pit. Connect pit lanyard to flange of CASS hose.

6.2.1.2. To prevent accidental hose separation from aircraft, secure air inlet hoses to aircraft with lanyards as required to keep air hose and adapter connected to aircraft.

6.2.1.3. Operate per operation placard.

6.2.1.4. If a problem occurs within the system after 5 minutes of operation a "RED" warning light on the control panel will illuminate warning the operator of one or more of the following conditions exist:

Table 1. Warning Conditions.

Surge HI/LO Alarm
Chiller Alarm
Discharge Air Pressure High Alarm
Standby Switch in Master or Standby Matching other Dock
Supply Fan Alarm
Low Temp Alarm
Air Pressure High
Blower Surge
Blower Bearing High Temp

6.2.1.5. If system fault occurs, the operator shall shut down the system by pressing the stop button.

6.2.2. Standby Blower Start Up:

6.2.2.1. Operate per operations placard.

7. Refuel/Defuel Operating.

7.1. General Warnings and Cautions: AFMAN 91-203, TO 00-25-172, Ground Servicing of Aircraft and Static Grounding Bonding, and applicable TOs.

7.1.1. In the event that fire suppression system is inoperative, 509 MOC will also notify the Fire Department requesting support for active fire suppression.

7.1.2. In the event of an emergency, activate the Hydrant Fuels Emergency Shutdown which is located on the wall closest to the fuel vault. When activated, this stops the fuel hydrant pumps at the pump house and a supervisory alarm is sent to the Base Fire Department.

7.1.3. Fueling operations inside the dock shall cease upon failure of the dock refuel operating system, see Para **7.2.2, 7.2.3, and 15.2.1** of this instruction.

7.2. Operating Procedures: Docks 1-14.

7.2.1. Push "PRESS TO TEST" button on interlock control panel located in hallway. All indicator lights illuminate. Correct any indicating malfunctions prior to proceeding.

7.2.1.1. If any red lights remain illuminated contact the 509 AMXS Facility Manager (660-687-3686) or, if after hours, 509 CES Customer Service (660-687-6380/6350). Ensure 509 AMXS Facility Manager is informed of any work order completed or created for tracking purposes.

7.2.2. Fuel vault exhaust fans operate when any fuel vault lid is in the open position. If ventilation fans are not operating, there will be NO FLASHING GREEN LIGHT. Refuel/defuel operation will not be attempted using fuel hydrant pits until defect is corrected, see **Para 15.2.1** of this instruction.

7.2.3. Turn “AGE POWER/FUELING” switch to the "FUELING" position for the desired maintenance bay. When properly activated, a green light on control panel will illuminate. Note: All utility stations and 110V outlets are deactivated when the “AGE POWER/FUELING” switch in the dock hallway is positioned out of “AGE POWER” to “FUELING” regardless of the “FUELING” light illuminating on the panel. The light not illuminating may be an indication of a fault in the dock refuel/defuel ventilation system. Note: A green strobe light in the maintenance bay will illuminate to indicate the refuel/defuel ventilation system has been activated and is ready for operation.

7.2.4. When there is a fault in the dock refuel/defuel ventilation system, fueling operations inside the dock (not using the dock refueling hydrant pit system), may still be accomplished with front doors open to at least the outside of the main landing gear (MLG) doors and back doors fully open to provide sufficient ventilation, see **Para 15.2.1** of this instruction.

7.2.5. Triangulated ground will be established between the ground, pantograph, and aircraft prior to connection to fuel vault.

7.2.6. Only Petroleum Oils and Lubricants (POL) and Liquid Fuels Maintenance (509 CE/LFM) personnel shall be allowed to connect the pantograph to the hydrant adapter in the fuel vault. Damage to equipment may occur.

7.2.7. After the pantograph has been connected to the hydrant adapter, the single point receptacle (SPR) adapters may be connected to the aircraft.

7.2.8. Upon completion of the refuel or defuel disconnect SPR and hydrant adaptor connector, reset scoreboard’s total flow, place the refuel/defuel switch to the “OFF” position. Retract ground wire back to pantograph, store the pantograph in proper location in the dock/hangar, close fuel vault lid, and remove sign from door.

7.2.9. Turn “AGE POWER/REFUEL” on interlock control panel located in the hallway, back to "AGE POWER" position.

8. Compressed Air/Vacuum System Operation.

8.1. General Warnings and Cautions: AFMAN 91-203 and applicable TOs.

8.1.1. Do not use low-pressure system in the dock for vacuum attachments that use a venturi-type fitting attachment to create vacuum. Severe damage to equipment may result.

8.1.2. Eye protection shall be worn while making and breaking of any compressed air connection or when compressed air is used for cleaning.

8.2. Operating Procedures: Docks 1-14, Hangar 1, 27, T-9, and LO-N & S.

8.2.1. Compressed Air:

8.2.1.1. The compressor automatically starts when the pressure drops to 125 PSIG and will automatically stop when the pressure reaches 150 PSIG.

8.2.1.2. This system is automatic and used with applicable TOs.

8.2.2. Ensure system regulator reads "0" pounds per square inch (PSI) before purging system of water before use.

8.2.2.1. Slowly open bleed valve under the regulator to bleed off all water before use.

8.2.2.2. Close bleed valve and set the regulator to required pressure.

8.2.3. Ensure system shut off valve is closed before bleeding off excess pressure from the regulator.

8.2.3.1. Turn regulator out until "0" PSI is on the pressure gauge.

8.2.3.2. Open bleed valve until all air is released and then close the bleed valve.

8.2.4. Vacuum System: LO-N & S only.

8.2.4.1. The vacuum system for cleaning up sanding dust or small debris is located throughout the ceiling of each LO bay.

8.2.4.2. The control panel is located next to the paint mode control panel with a map and controls for each hose reel.

8.2.4.3. Unroll applicable vacuum hose from ceiling.

8.2.4.4. Turn applicable vacuum on by the "ON/OFF" switch on the control panel.

8.2.4.5. Vacuum system is designed to vacuum small debris that is no larger than ¼ inch in diameter. Failure to comply may cause damage to equipment.

9. Nitrogen System Operation.

9.1. General Warnings and Cautions: AFMAN 91-203 and applicable TOs.

9.1.1. Eye protection shall be worn while making and breaking of any compressed nitrogen connection or when compressed nitrogen is used for servicing.

9.1.2. Ensure system pressure is at "0" PSI prior to connecting/disconnecting the servicing hose.

9.2. Operating Procedures: Docks 1-14 and T-9.

9.2.1. Connect extended hose to high or low pressure port.

9.2.2. Ensure the shutoff valve on the hose is closed.

9.2.3. Purge hose per applicable technical data.

9.2.4. Adjust pressure for required servicing.

9.2.5. When servicing is complete adjust pressure to "0" PSI.

9.2.6. Open vent valve to bleed pressure from hose, and then turn vent, service and system valves to the off position.

9.2.7. Disconnect and store servicing hose.

10. Fall Arrestor System Operation.

10.1. General Warnings and Cautions: AFMAN 91-203, 509 MXG Local Work Card (LWC); LWC509MXG-MXQP(509 Maintenance Group Technical Order Distribution Office)- 009, Self-Retracting Lifeline System Inspection Criteria, TO 00-25-245, Testing and Inspection Procedures for Personnel Safety and Rescue Equipment, also applicable equipment operations and maintenance manuals.

10.1.1. Remove any obstructions, debris, and other materials from the work area that could cause injuries or interfere with operation of the unit.

10.1.2. Do not lubricate Fall Arrestor System.

10.1.3. Do not use Fall Arrestor System if the cable does not retract fully, lock when rapidly extended, if any part of the system has been damaged, or the arrestor has been used to arrest a fall.

10.1.4. Fall Arrestor System shall not be used when there is possibility of a swing fall. Injury to personnel may result.

10.1.5. Work shall be accomplished directly under arrestor to reduce possible swing fall injury.

10.1.6. Allow 3ft of clearance in the event of a free fall.

10.1.7. Work shall never be performed above the Fall Arrestor.

10.1.8. Fall Arrestor System shall never be used as a restraint or positioning device.

10.1.9. Never allow arrestor harness to pass under or around the user.

10.1.10. Check the maximum harness length required before descending. A minimum of 3ft should remain in the reel.

10.1.11. Only an approved service engineer may perform maintenance on the Fall Arrest System.

10.1.12. Prior to use, ensure all equipment is clear of electrical hazards and ensure proper ventilation in work area.

10.1.13. Designed working load is a maximum of 300 lbs. Refer to owner’s manual for maximum load capacity.

11. Hoist System Operation.

11.1. General Warnings and Cautions: AFMAN 91-203.

11.1.1. Remove obstructions, debris, and other materials from the work area that could cause injuries or interfere with the operation of the unit.

11.1.2. Hoist System shall not be used when there is possibility of a swing lift. Injury to personnel or damage to equipment may result.

11.1.3. Do not attempt to use the Hoist System if any unsatisfactory conditions exist.

11.1.4. Only approved service engineer may carry out maintenance of Hoist System.

11.1.5. Hoist System is maintained and tracked by 509 CES.

11.1.6. Hoist System will be sent to a qualified repair station on a biannual basis for physical inspection and recertification.

11.1.7. Prior to use, ensure all equipment is clear of electrical hazards.

11.2. Operating Procedures: T-9, Hangar 1.

11.2.1. Review AFTO Form 244.

11.2.2. Select the "ON" button located on North wall of the hangar.

11.2.3. Select desired direction by pushing applicable button.

11.2.4. Turn unit off when no longer needed.

12. Grounding System.

12.1. General Warnings and Cautions: AFMAN 91-203, TO 00-25-172, and applicable TOs.

12.2. General Description:

12.2.1. Each hangar bay has 12 shepherd hook aircraft tie-down rods with molded formed depressions flush with floor slab.

12.2.2. There is a ground rod installed in the fuel vault of each bay.

12.2.3. Aircraft tie-downs and grounding rods connect by a bare copper conductor, exothermically welded together. Conductors connect to building columns at 7 locations.

13. Lighting System Operation.

13.1. General Warnings and Cautions: AFMAN 91-203 and National Electric Code (NEC).

13.2. Operating Procedures: Docks 1-14, T-9, Hangar 1, 27, and LO-N & S.

13.2.1. Light switches for the maintenance bays are located next to hallway access door.

13.2.2. Emergency lighting is provided in case of power failure. Battery Power backup provides lighting in hangar bays, halls, and essential areas. Battery power provides a maximum of 2 hours illumination in the event of a power outage.

14. Temperature Control System.

14.1. General Warnings and Cautions: AFMAN 91-203.

14.2. Operating Procedures: Docks 5/6,13/14, Hangars 1 & 27, T-9, and LO-N & S.

14.2.1. Front Hangar doors must be closed before air handlers will run.

14.2.2. If air handlers are not running with front doors closed, notify applicable building custodian or Production Superintendent.

14.2.3. In case of extreme heat in docks, temporarily open front doors approximately 10ft to shut off air handler or open louvers.

15. Ventilation/Vapor Detection and Exhaust System.

15.1. General Warnings and Cautions: AFMAN 91-203.

15.2. Operating Procedures: Docks 1-14, Hangars 1 & 27, T-9, and LO-N & S.

15.2.1. Any failure in the exhaust fan system will be indicated on the interlock panel located in hallway. Any faults will also disable dock pantograph refueling system until defect in exhaust fan system is corrected. "Refueling is Authorized By R11 Trucks Only" (Docks 1-14).

15.2.2. Failure of fuel vault exhaust fans will only be indicated when fuel vault lid is opened to energize system. (Docks 1-14).

15.2.3. "ON/OFF" switch for APU fans are located on dock utility station at rear of aircraft for Docks 5-14. For Docks 1-4 APU fan switches are located next to hallway personnel door.

15.2.4. The "ON/OFF" switch to open/close louvers over hangar doors is also located next to APU fan switch. (Docks 1-14).

15.2.5. APU fans should come on within several seconds of switch actuation, and louvers open immediately. (Docks 1-14).

15.2.6. Detection of explosive vapors, or high levels of carbon monoxide by the vapor detection system will sound the warning horn in the hangar bay and automatically turn on the APU exhaust fans and open the louvers. Fans will continue to run and cannot be shut off until the vapor detector panels located in the hallway are reset.

15.2.7. Investigate the cause of alarm and open dock doors if necessary to dissipate vapors.

15.3. Fuel Tank Purge Blowers: (Hangar 1).

15.3.1. Blower Operation:

15.3.1.1. Lower the applicable blower to the desired height by using the manual crank.

15.3.1.2. Attach air ducts as necessary to the blower to route the air where desired.

15.3.1.3. Blower switches are located on the northwest wall of hangar; select desired blower setting of East, West, or both blowers.

15.3.1.4. Select purge or cure depending on applicable task.

15.3.2. Fuel Tank Exhaust System:

15.3.2.1. Open 3 of 10 exhaust pits and place exhaust covers over the opening.

15.3.2.2. If covers are not available; cones shall be placed near the openings.

15.3.2.3. Turn the switch located on the Northwest wall to the "ON" position.

15.4. Paint Booth: (LO-N & S, Hangar 27).

15.4.1. Hangar doors shall NOT be operated when in "PAINT MODE" except in the event of an emergency, or instructed by the LO supervisor on site, damage to air cycle operation may result.

15.4.2. A safety concern exists for the personnel exit door located in each dock on the center west side of each hangar. When the hangar is in "PAINT MODE", caution should be used as doors may close rapidly due to air pressure.

15.4.3. Paint booth operation shall only be operated by the LO supervisor on site.

15.4.4. Control panel for paint booths and climate controls are located inside each personnel entry door for each dock.

15.4.5. Mode selection switch controls paint booth ventilation and filtration.

15.4.6. Turning switch to "PAINT MODE" will activate the applicable paint booth.

15.4.7. Mode selection switch shall NEVER be placed to the "OFF" position.

15.4.8. If "PAINT MODE" is NOT being utilized, mode selection switch shall be positioned in "NORMAL MODE" to keep temperature and humidity within predetermined parameters.

15.4.9. When the hangar is in "PAINT MODE", the system will shut down if either inner or outer hangar doors are opened.

16. Accessing and Securing of Facilities.

16.1. General Warnings and Cautions:

16.1.1. Any time maintenance bays are being occupied, all personnel doors shall be unlocked.

16.1.2. Any time the main access door is unlocked and maintenance bay is occupied, the "PUSH FOR SAFETY" button located on the backside of lock must be pushed in. This will prevent door from being inadvertently locked from the outside and allow free access in the event of emergency.

16.1.3. If the wrong combination is entered a lightning bolt symbol will appear.

16.1.4. If you have problems with the lock, ensure the correct combination is being used.

16.1.5. If you enter the wrong combo more than three times, the system will lock out and take approximately 15 minutes to reset.

16.2. Operating Procedures: Docks 1-14, Hangars 1, 27, T-9, and LO-N & S.

16.2.1. Accessing facility:

16.2.1.1. Contact Security Forces to obtain clearance to access the facility 660-687-2178.

16.2.1.2. Enter applicable combination as follows for lock types X-09 and X-10.

16.2.1.2.1. Dial left three times to "power up" the lock.

16.2.1.2.2. When numbers appear on the display, continue dialing, example combination 50-25-50.

16.2.1.2.3. Left to first number 50. Stop.

16.2.1.2.4. Right to second number 25. Stop.

16.2.1.2.5. Left to third number 50. Stop.

16.2.1.2.6. Right to open, "OP" shows in display window. Continue right to unlatch bolt.

16.2.1.3. Document Standard Form (SF) 702, Security Container Check sheet.

16.2.1.4. Enter applicable combination in cipher lock and open access door.

16.2.1.5. Push in button marked "PUSH FOR SAFETY" on backside of lock back plate.

16.2.1.6. The following must be checked/inspected prior to maintenance being performed:

16.2.1.6.1. Unlock all personnel doors.

16.2.1.6.2. Check portable fire extinguishers for condition and proper charge.

16.2.1.6.3. Inspect and check Dock/hangar inventory on the back of the entry door, and ensure all required equipment is present or accounted for.

16.2.1.6.4. Required equipment is to stay in the dock at all times or returned by end of duty day. (i.e.: ladders, air hoses, spill kits, and etc.)

16.2.1.6.5. Any discrepancies found will be reported to Facility Manager or Production Superintendent.

16.2.2. Securing Facility:

16.2.2.1. Lock all personnel doors.

16.2.2.2. Ensure fire suppression system is activated and all red blinking lights are off.

16.2.2.3. Ensure all external cords and hoses are removed from between dock/hangar doors.

16.2.2.4. Turn facility lights off.

16.2.2.5. Pull "PUSH FOR SAFETY" button out on back of lock. Close door.

16.2.2.6. Spin dial to left, sound of bolt closing is heard.

16.2.2.7. Enter applicable combination in cipher lock then turn the door handle while pulling and pushing on the door to ensure it is secure.

16.2.2.8. Fill out SF 701, Activity Security Checklist, and SF 702 (examples are on entrance door).

16.2.2.9. Contact Security Forces to arm the facility alarm and monitor door sensors 660-687-2178.

17. Emergency Eye Wash.

17.1. General Warnings and Cautions: AFMAN 91-203.

17.2. Operating Procedures: Docks 1-14, Hangars 1, 27, T-9, and LO-N & S.

17.2.1. Permanently-installed shower and eyewash units shall be activated by a supervisor or worker weekly to verify proper operation and function and then documented when complete.

17.2.1.1. The unit only needs to be activated long enough to ensure there is adequate pressure, volume of water available and all orifices are free of obstructions.

17.2.2. Notify Facility Manager if a build-up of scale, rust, etc... Note: Spray heads or nozzles shall be removed and cleaned or replaced.

17.2.3. Supervisor shall inspect permanently-installed units monthly IAW AFMAN 91-203 Para 9.4.2 and document the inspection.

17.2.3.1. Documentation of monthly testing will be maintained to show date of test and name of individual performing test.

17.2.3.2. Documentation may be kept in a log, computerized, or affixed to the equipment by tag or label.

18. Dock/Hangar Operating Restrictions.

18.1. LO North and South Hangars:

18.1.1. Total aircraft gross weight may not exceed 169,500 lbs.

18.1.2. B-2 aircraft shall be de-fueled to zero fuel load prior to entering hangars.

18.1.3. Aircraft containing fuel requires Fire Department coordination prior to entry into hangar.

18.1.4. No refuel, defuel, or transfer of fuel.

18.1.5. No tank or confined space entry.

18.1.6. Fuel system maintenance authorized on externally mounted components only.

18.1.7. No engine/APU operation.

18.1.8. No aircraft washing.

18.1.9. No aircraft loaded with weapons.

18.2. T-9.

18.2.1. No engine/APU operation.

18.2.2. No refuel, defuel, or transfer of fuel.

18.2.3. No tank or confined space entry.

18.2.4. Fuel system maintenance authorized on externally mounted components only.

18.2.5. No radar operation.

18.2.6. No aircraft washing.

18.2.7. No aircraft loaded with weapons.

18.3. Hangar 1.

18.3.1. Primary facility for all fuel system maintenance.

18.3.2. No engine/APU operation.

18.3.3. No radar operation.

18.3.4. No aircraft washing.

18.3.5. No aircraft loaded with weapons.

18.4. Hangar 27.

18.4.1. No engine/APU operation.

18.4.2. No refuel, defuel, or transfer of fuel.

18.4.3. No tank or confined space entry.

18.4.4. Fuel system maintenance authorized on externally mounted components only.

18.4.5. No radar operation.

18.4.6. No aircraft loaded with weapons.

18.5. Docks 1-14.

18.5.1. Engine operation authorized, power setting is limited to 85% engine core speed (N2).

18.5.2. Temporary facility/location for all fuel system maintenance when requirements outlined in TO 1-1-3 paragraph 3.2.5 are met. Primary facility (Hangar 1) shall be utilized prior to temporary facility being established.

18.5.2.1. If a Temporary facility/location is to be used, an addendum to the Master Entry Plan must be routed and approved through the following agencies: 509th Maintenance Squadron Fuel Systems (509 MXS/MXMCF), 509th Medical Operations Squadron Bioenvironmental (509 MDOS/SGOJ), 509th Civil Engineer Squadron Fire Department (509 CES/CEF), 509th Bomb Wing Occupational Safety (509 BW/SEG), 509 MXS/CC and 509 MXG/CC.

18.5.3. Reference AFMAN 91-201_Air Force Global Strike Command Supplement (AFGSCSUP) _Whiteman Air Force Base Supplement (WAFBSUP), Explosives Safety Standards, for Munitions limitations.

DANIEL C. DIEHL, Colonel, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 33-322, *Records Management and Information Governance Program*, 22 March 2020

AFMAN 91-201_AFGSCSUP_WAFBSUP, *Explosives Safety Standards*, 12 May 2020

AFMAN 91-203, *Air Force Occupational Safety, Fire, and Health Standards,* 11 Dec 18

AFPD 91-1, *Nuclear Weapons and Systems Surety*, 30 Nov 2016

TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding Bonding*, 6 Sep 2019

TO 00-25-245, *Testing and Inspection Procedures for Personnel Safety and Rescue Equipment*, 21 Jul 2020

WAFBI 32-2001, *Fire Prevention/Protection Program*, 28 Jan 2015

LWC509MXG-MXQP- 009, *Self-Retracting Lifeline System Inspection Criteria,* 1 May 2019

Prescribed Forms

None

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

AFTO Form 244, *Industrial/Support Equipment Record*

SF 701, *Activity Security Checklist*

SF 702, *Security Container Check sheet*

Abbreviations and Acronyms

509 AMXS—509th Aircraft Maintenance Squadron

509 BW—509th Bomb Wing

509 BW/SEG—509th Bomb Wing Occupational Safety

509 CE/LFM—509th liquid Fuels Maintenance

509 CES—509th Civil Engineer Squadron

509 CES/CEF—509th Civil Engineer Squadron Fire Department

509 MDOS/SGOJ—509th Medical Operations Squadron Bioenvironmental

509 MOC—509th Maintenance Operations Center

509 MXG/CC—509th Maintenance Group Commander

509 MXG/MXQP—509 Maintenance Group Technical Order Distribution Office

509 MXS—509th Maintenance Squadron

509 MXS/CC—509th Maintenance Squadron Commander

509 MXS/MXMCF—509th Maintenance Squadron Fuel Systems

ACFM—Actual Cubic Feet per Minute

AFGSCSUP—Air Force Global Strike Command Supplement

AFMAN—Air Force Manual

AFOSH—Air Force Occupational and Environmental Safety, Fire Protection, and Health

AFPD—Air Force Policy Directive

AFRIMS—Air Force Records Information Management System

AFTO—Air Force Technical Order

AGE—Aerospace Ground Equipment

ANG—Air National Guard

APU—Auxiliary Power Unit

CASS—Conditioned Air Supply System

IAW—In Accordance with

IE—In Example

LO—Low Observable

LWC—Local Work Card

MLG—Main Landing Gear

N2—Engine Core Speed

NEC—National Electric Code

OJT—On the Job Training

OPR—Office of Primary Responsibility

Para—Paragraph

POL—Petroleum Oils and Lubricants

PSI—Pounds Per Square Inch

PSIG—Pounds per Square Inch Gauge

RDS—Records Disposition Schedule

SF—Standard Form

SPR—Single Point Receptacle

TO—Technical Order

3IR—Infrared

WAFB—Whiteman Air Force Base

WAFBI—Whiteman Air Force Base Instruction

WAFBSUP—Whiteman Air Force Base Supplement