

**BY ORDER OF THE COMMANDER
OF OSAN AIR BASE**

OSAN AIR BASE INSTRUCTION 91-201



**7 JULY 2021
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Safety**

**WEAPONS SAFETY
PROGRAM MANAGEMENT**

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This instruction implements AFPD 91-2, *Safety Programs* and together with corresponding Department of Defense (DoD), Air Force, PACAF, and 7 AF directives, establishes the Weapons, Explosives, Missile, Munitions Handling, Transportation, and Mishap Prevention Program for Osan AB. This instruction clarifies wing and unit responsibilities, establishes weapons safety program management, transportation, explosives loaded combat and cargo aircraft parking areas and storage locations for explosives. It applies to all activities and personnel assigned or attached to Osan AB. 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*; route AF Forms 847 from the field through the appropriate functional chain of command. Ensure that all records created as a result of processes prescribed in this publication are maintained 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 and needs to be completely reviewed. Major changes include: Added; Tenant units must have Memorandum of Understanding (MOU) on para 1.1.1. Updated; reference outlined in AFI 91-202, *The US Air Force Mishap Prevention Program* and AFI 91-202_PACAFSUP, from para 1.5; Delete; outdated reference in AFMAN 91-201,

Explosives Safety Standards, para 2.2 through 2.4 from [para 1.6](#) Updated reference AFMAN91-201 from [para 1.7](#) Deleted; Munitions Operations and replaced with Munitions Accountability Systems Office (MASO) from [para 1.7](#) Deleted; reference AFMAN 91-201, para. 2.2 from [para 1.8](#) Added; reference AFI 91-202_PACAFSUP, para 9.11 from [para 1.8](#) Delete; reference AFI 91-202 from [para 1.8.4](#) Deleted; Munitions Flight (51MXS/MXMW) from [para 1.9](#) Updated; AFMAN 91-201 reference in [para 1.10](#) Deleted; Community of Practice (CoP) link from [para 1.13.1](#) Added 51FW Safety SharePoint link. Deleted; reference AFMAN 91-201, para 2.25.8.8 and statement about flightline area not placarded from [para 1.13.2](#) Added; Flightline area will be placard in [para 1.13.2](#) Deleted; reference AFMAN 91-201, T3.3, Note 12 from [para 1.13.3](#) Added; reference AFMAN 91-201_PACAFSUP, 10 October 2017, Note 29. Deleted; reference 51 FWI 21-112 from [para 1.14](#) Added; reference OSANABI 21-112, *End of Runway (EOR)/Explosive Loaded Aircraft, Hung Ordnance/Gun System Malfunction Procedures, and Hung Ordnance/Gun System Malfunction Impoundment*. Deleted; CoP Link from [para 1.15](#) Added; SharePoint link in [para 1.15](#) Deleted; reference AFI 91-301, *Air Force Occupational Environmental Safety, Fire Protection, and Health (AFOSH) Program* from [para 1.16](#) Deleted; reference AFMAN 91-201, para 2.3 and 2.4 from [para 2.1.11](#) Added; recommendation to appoint Nuclear Certified Equipment (NCE) monitors to Additional Duty Weapons Safety Representative (ADWSR) in [para 2.2.1](#) Added; reference AFMAN 91-201, para 7.2 in [para 2.1.11](#) Deleted; CoP link from [para 2.2.2](#) Added; SharePoint link to the ADWSR program continuity digital book in [para 2.2.2](#) Deleted; phrase “per shift” from [para 2.2.3](#) Deleted; reference outdated AFI 91-202_PACAFSUP, Chapter 10 from [para 2.2.5](#) Delete. Added; Department of Defense Explosive Safety Board (DDESB) acronym in [para 2.3.9](#) Deleted; reference [Table A6.5](#) from [para. 2.4](#) Added; reference [Table A2.1](#) in [para 2.4](#) Added [chapter 3](#), paragraphs [3.1](#) through [3.3](#) Deleted: [Attachment 2](#) “Explosive Weights of Commonly Used Munitions” and [Attachment 3](#) “Additional Duty Weapons Safety Manager Appoint Letter Template.” Added: [Attachment 2](#) “Osan AB Compensatory Measures.” Removed references to AFMAN 91-201_PACAFSUP and AFI 91-202_PACAFSUP in paragraphs [1.3](#), [1.5](#), [1.8](#), [1.13.3](#), and [Attachment 1](#). Changed references from AFMAN 91-201 to DESR 6055.09_AFMAN 91-201, *Explosives Safety Standards*, in paragraphs [1.2](#), [1.7](#), [1.10](#), [2.1.11](#), [2.7.5.6](#), and [Attachment 1](#). Removed paragraphs [2.7.5.2](#) and [2.7.5.4](#) and added paragraphs [1.19](#) and [1.19.1](#) Renamed paragraphs [2.7.5.3](#), [2.7.5.5](#), and [2.7.5.6](#) to [2.7.5.2](#), [2.7.5.3](#), and [2.7.5.4](#) Added [chapter 4](#)., paragraph [4.1](#), and [4.2](#) Removed AF Form 332 from [paragraph 2.7.3.6](#) and *Adopted Forms*.

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1. Program Description.

1.1. Weapon Safety Program Management. IAW AFI 91-202, paragraph 9.1, the Weapons Safety Program is comprised of four disciplines: Explosives Safety, Missile Safety, Nuclear Surety and Directed Energy Weapon Safety. At Osan Air Base the focused disciplines are Explosives and Missile Safety.

1.1.1. The 51 FW Weapons Safety (51 FW/SEW) office is host and coordinates all weapons safety requirements for the base. All tenant units must align their safety programs with the 51 FW/SEW office. Tenant units must coordinate, through a MOU any additional program functions with the host to avoid duplication and clearly delineate responsibility.

1.2. General Explosive Safety Standards. Air Force explosive safety standards are in DESR 6055.09_AFMAN 91-201.

1.3. Appointment of ADWSR. IAW AFI 91-202, Units that handle, maintain, store, install or remove missiles, explosives, chemical or nuclear weapons will appoint an ADWSR. Commanders will appoint in writing a primary, in the grade of E-5 or above and an alternate, in the grade of E-4 or above and send the letter to 51 FW/SEW. This letter must contain individual's name/rank, office symbol, DEROS, duty phone, and email address. Subsequent replacements will be assigned NLT 30 days prior to current ADWSR PCS. Individuals selected must have at least nine months retainability and be knowledgeable in the mission and activities of the unit and be afforded adequate time and opportunity to perform duties. The weapons safety office must train ADWSRs within 30 days of being assigned ADWSR duties.

1.4. Explosives Safety Program. A comprehensive program developed to actively manage all aspects of safety, where all materials under the definition of explosives are involved. Implementation of an effective explosives safety program must be equally shared by the wing and tenant units and supported by all levels of management, supervision, and operation.

1.5. Missile Safety Program. Weapons safety program requirements are outlined in AFI 91-202, para. 9.6.

1.5.1. Missile safety is the same as explosive safety in most aspects. However, some additional areas of concern must be included in the unit's lesson plans and tests. These are as follows:

1.5.1.1. Procedures for handling Air-to-Air missiles, drop criteria and hazards associated with.

1.5.1.2. Unique handling and transportation problem areas; e.g., trailer turning radius, tie down procedures, forklift operations, missile container movement etc.

1.5.1.3. Using qualified spotters during munitions movements; e.g., loading/unloading stacks of missiles/bombs on/off trailers and in/out of storage facilities.

1.6. Developing Explosive Operating Instructions (OI) ADWSR must ensure locally written instructions are completed if applicable and signed by commander. These instructions will be maintained at the operating location. Coordinate all locally developed instructions through 51 FW/SEW prior to use and annually thereafter. Provide 51 FW/SEW an electronic copy of all unit OIs.

1.7. Explosive Facility License. Units requiring storage of ammunition and explosives to support a specific explosives operation or mission must obtain approval from the 51 FW weapons safety office. The safety office will prepare an example AF Form 2047, *Explosive Facility License*, IAW DESR 6055.09_AFMAN 91-201, V6.E3.6.1.4.6.1, and the ADWSR will complete the coordination process. The license will require unit commander approval and coordination through Security Forces Squadron (Resource Protection), Base Civil Engineering Squadron (Fire and Emergency Services and Operations Flight) and MASO prior to weapons safety approving it.

1.7.1. Licensed storage locations of portable metal box-type (CONEX) construction located outdoors do not require lightning protection. However, licensed locations where unpackaged electrically initiated explosives (i.e. impulse cartridges) are handled will be equipped with a static bus bar to dissipate static electricity. Provide appropriate grounding and bonding in accordance with AFMAN 32-1065, *Ground & Electrical Systems*, Table A2.1, line 12b.

1.8. Explosive Safety Training. Host and tenant unit requirements listed in AFI 91-202, paragraph 9.11 will be managed by the appointed ADWSR or through a formal course. Additionally, Commanders will ensure the following:

1.8.1. Ensure unit personnel, whose duties involve handling, storage, functioning, transporting, or using explosives, are trained and qualified in the tasks performed. Training will be conducted initially upon assignment and annually thereafter.

1.8.2. Ensure unit personnel selected to operate explosives-loaded vehicles/materials handling equipment (forklifts, metro vans, K-loaders, flatbeds, etc.) receive explosives training and are tested on procedures for transporting explosives.

1.8.3. Ensure explosives safety training is actively managed and documented.

1.8.4. Ensure lesson plans/guides are developed by the unit, and are being used to conduct the required training.

1.8.5. Provide 51 FW/SEW an electronic copy of all unit explosive lesson plans and tests.

1.9. Local Purchase of Munitions. Osan AB does not purchase any local commercial explosives.

1.10. Military Working Dog Program. Prior to conducting any Military Working Dog explosive training operation, K-9 section must contact the weapons safety office. Provisions of DESR 6055.09_AFMAN 91-201, V1.E6.28 and V4.E5.17, and AFMAN 24-306, *Operation of Air Force Government Motor Vehicles*, will be adhered to while conducting these operations.

1.11. Explosive Movement Routes. All explosives, ammunition or other hazardous material transported on Osan AB will use established routes. Deviations from established routes must be coordinated with wing weapons safety office, prior to their use and will avoid all key resources and facilities. These routes do not apply to host or tenant munitions custody or consumption accounts or to base Security Forces explosives detection dog personnel conducting operational training. However, all routes traveled will be direct and will avoid heavily populated or congested base areas as much as possible. Except for emergencies, en route stops will not be made. Established movement routes for Osan AB are identified on the Base Explosive Map D-8. Maps may be obtained from 51 CES Geo Integration Office (GeoBase) via <https://osws102.area52.afnoapps.usaf.mil/Home/GBRT/>.

1.12. Inspection of Incoming Shipments. All inbound explosives by truck are moved to Alpha/Delta MSAs and will be joint inspected by TMO/51 MUNS prior to entry IAW OSANABI 24-601, *Transportation Traffic Management*.

1.12.1. 51 LRS will inspect all commercial and military motor vehicles carrying explosives. Exception: Security Forces, 35th Air Defense Artillery (ADA) Brigade Patriot North Battalion, and Munitions Flight will perform their own vehicle inspections prior to further movement on base.

1.12.2. These agencies must produce an operating instruction covering transportation procedures for both on and off-base. Coordinate operating instructions through wing weapons safety prior to implementation.

1.12.3. The safety office and Fire Emergency Services Flight will be notified of any vehicle found or suspected to be in a hazardous condition.

1.13. Explosives-Loaded Aircraft Parking. Park explosives-loaded aircraft in accordance with AFMAN 11-218, *Aircraft Operations and Movement on the Ground*, AFI21-101_PACAFSUP_OSANABSUP, *Aircraft and Equipment Maintenance Management*, and OSANABI 13-204, *Airfield Operations and Local Flying Procedures*.

1.13.1. Primary parking, loading, and unloading areas for explosive loaded cargo and combat aircraft are listed on TAB D-8 of Civil Engineering Comprehensive Base Plan (map) per explosive site plans. Explosive site plans are maintained and on file by 51 FW/SEW. A quick reference (NEW Chart) is located on the 51st Fighter Wing Safety, SharePoint:

<https://usaf.dps.mil/sites/osan/51FW/51FWSTAFF/51FWSE/WeaponsSafety/Shared%20Documents/Forms/AllItems.aspx?viewpath=%2Fsites%2Fosan%2F51FW%2F51FWSTAFF%2F51FWSE%2FWeaponsSafety%2FShared%20Documents%2FForms%2FAllItems%2Easpx>.

1.13.2. Flightline area will be placarded at entry control points and the east side Taxiway Foxtrot to identify the hazards present. Weapons expeditors will notify Maintenance Operation Center (MOC) who will in turn notify the Fire and Emergency Services Emergency Communications Center (ECC) with; Aircraft tail number, parking location, class/division, governing symbol, quantity and type of explosives present. If re-positioning munitions for exercise or contingencies, notify MOC that munitions are located on floor. Emergency procedures will be IAW applicable technical order or checklist.

1.13.3. Hardened Aircraft Shelter (HAS) door procedures. Net Explosive Weight (NEW) authorizations are valid at all times unless specifically stated otherwise. NEW is based on shelter doors remaining closed, except for towing, fueling, servicing, run-up, taxiing, Concurrent Servicing Operations (CSOs), and short periods to move equipment and munitions. The following actions constitute servicing;

1.13.3.1. HAS doors may be opened a minimum of 10 feet in conjunction with liquid oxygen or nitrogen servicing and weapons loading and unloading.

1.13.3.2. Each leg of Alpha Diamond may be serviced at one time with doors open 10 feet for scheduled flyers. When servicing is complete on one leg, HAS doors must be closed before proceeding to next leg.

1.13.3.3. When operating aerospace ground equipment on aircraft in HAS.

1.13.3.4. When conducting aircraft maintenance engine runs.

1.13.3.5. When a break in servicing or maintenance should occur, and no individuals are present, the doors must be closed within 30 minutes.

1.13.3.6. Upon Pilot arrival for launch of aircraft and notification of aircraft landing.

1.14. Hung Ordnance and Jammed Gun Procedures. Follow guidance outlined in OSANABI 21-112.

1.15. Authorized Munitions Storage Areas. Authorized munitions storage locations are listed on TAB D-8 of Civil Engineering Comprehensive Base Plan (map) per explosive site plans. Explosive site plans are maintained and on file by 51 FW/SEW. A quick reference (NEW Chart) is located on the SharePoint: <https://usaf.dps.mil/sites/osan/51FW/51FWSTAFF/51FWSE/WeaponsSafety/Shared%20Documents/Forms/AllItems.aspx?viewpath=%2Fsites%2Fosan%2F51FW%2F51FWS%2FTAFF%2F51FWSE%2FWeaponsSafety%2FShared%20Documents%2FForms%2FAllItems%2Easpx>.

1.16. Safety Inspections. Safety inspections help identify hazards and measure compliance with safety program requirements outlined in. Through inspections, the wing safety staff helps the commander determine the condition of work areas, the safety of work practices, the degree of compliance with safety and health standards, and the degree of compliance with safety program requirements. To provide this assistance safety will use outlines as provided in AFI 91-202. The weapons safety staff will:

1.16.1. Inspect all explosive locations at least once a year, except as otherwise directed.

1.16.2. Inspect all high-interest areas monthly by spot inspection and annually as part of the explosive location inspection.

1.16.3. Inspect all explosive locations periodically, through spot inspections.

1.16.4. Inspections will be either "prior-notice" or "no-notice." Inspections will be combined with other inspections to reduce the number of inspections a unit receives.

1.17. Electro-Magnetic Radiation (EMR)

1.17.1. All units deploying to Osan AB that bring their own radios must contact 51 FW/SEW prior to using them to have an EMR analysis accomplished by 51 FW/CS.

1.18. Flak Vest/Chemical Warfare Defense Ensemble (CWDE)/Gore-Tex Wear Policy. Normally, clothing materials acceptable for flightline use are acceptable for handling munitions (TA 016). Cotton or cotton-synthetic blend materials are preferred. Materials of 100 percent polyester, nylon, rayon, silk, or wool are highly static producing. Wool socks, glove inserts, and caps as well as undergarments of synthetic fabrics are less of a hazard. Nylon garments should not be worn as an outer garment. Gortex garments may be worn during explosive operations if there are no exposed explosives. Open or ruptured rounds constitute exposed explosives. Explosives in the All Up Round (AUR) configuration are NOT considered exposed explosives. Personnel, regardless of the type of clothing worn, can collect a charge of static electricity by being in contact with moving non-conductive substances, or coming in contact with a mass that has been previously charged. Therefore, personnel must be careful to discharge their static electrical potential or equalize it to that of the explosive item before it is handled. Particularly avoid directly touching electrical primer.

1.19. Squadrons will coordinate with the Osan command post when aircraft or vehicles loaded with non-nuclear munitions are arriving or departing Osan AB.

1.19.1. Squadrons will coordinate operating requirements with Osan Command Post when aircraft loading and unloading activities involve explosives or hazardous materials.

2. Specific Responsibilities.

2.1. Unit Commanders. All commanders having a mission or participating in functions involving explosives or the transportation of explosives are responsible for implementing a mishap/incident prevention program. Along with appointment of an ADWSR (See [para 2.2.1](#)), they will:

2.1.1. Enforce safety standards and all mishap prevention procedures.

2.1.2. Maintain an open line of communication and coordination with the 51 FW weapons safety office on all directives, which involve explosives.

2.1.3. Assign only trained and qualified personnel to perform activities involving explosives or transportation of explosives.

2.1.4. Immediately notify the 51 FW weapons safety office and command post when mishaps occur involving explosives or transportation of explosives. Prompt notification will enable the 51 FW weapons safety office to advise responsible commanders of reporting requirements or other necessary actions.

2.1.5. Review all safety inspection findings in their areas of responsibility for lasting corrective actions and any necessary follow-up required as a result of the findings.

2.1.6. Provide a copy of all incoming and outgoing messages pertaining to explosives or hazardous materials transportation to 51 FW/SEW.

2.1.7. Review and certify the need to store minimal quantities of operational necessity explosives within the organization. Certification is accomplished via AF Form 2047, which is submitted to 51 FW/SEW for review and approval.

2.1.8. Initiate Product Quality Deficiency Reports (PQDR) for defective or malfunctioning explosives/components discovered during use, handling, or storage.

2.1.9. Ensure the MOC is notified of the following situations: (1) When each aircraft is loaded or unloaded with Class/Division 1.1, 1.2, 1.3, and 1.4 (1.4 in excess of 1,000 pounds gross weight) explosives, giving the aircraft tail number, parking location, and the type of explosives involved. (2) Prior to movement of explosives into or out of HASs or hardstands, as well as the projected destination. If pre-positioning munitions for exercise or contingencies notify MOC that munitions are located on floor.

2.1.10. Ensure all personnel comply with explosive safety standards for transporting of explosives or ammunition.

2.1.11. Ensure explosives operating instructions are available and if applicable, developed in accordance with DESR 6055.09_AFMAN 91-201, V1.E6.12.

2.1.12. Coordinate current or future explosive mission changes and needs with wing weapons safety.

2.1.13. With the assistance of the 51 FW/SEW office, coordinate and complete the local Tier Two Request Memorandum and route to 51 FW/CC for indorsement when contingency, training, or staging operations require the relevant compensatory measures identified in **Attachment 2** of this document.

2.1.13.1. A staff operation acknowledgement document will be signed by all applicable Commanders no later than 14 days prior to start of event.

2.2. Additional Duty Weapons Safety Representatives (ADWSR).

2.2.1. Ideally, these individuals will be familiar with explosive operations; however, commanders may combine explosives, ground, and flight (if applicable) safety programs under a single representative. Identify replacements and start new appointment letter when current ADWSRs are within 30 days of PCS or sooner.

2.2.1.1. Persons selected must have at least nine months retainability.

2.2.2. Maintain weapons safety management program utilizing 51 FW ADWSR training slides, and through the SharePoint: <https://usaf.dps.mil/sites/osan/51FW/51FWSTAFF/51FWSE/WeaponsSafety/SitePages/Home.aspx>.

2.2.3. Perform spot inspections at the rate of one per month. Inspect areas such as explosive operating locations and storage facilities. Document spot inspections and corrective actions according to 51 FW ADWSR Users Guide.

2.2.4. Maintain explosive/weapons safety bulletin boards. Bulletin boards may be combined with other safety boards and should be located near operating locations, work centers, or break areas. Post the following items as a minimum:

2.2.4.1. The Current Unit Weapons Safety Representatives Letter

2.2.4.2. AF Forms 457, *USAF Hazard Report*.

2.2.4.3. Current Weapons Safety Communiqués and Newsletters

- 2.2.4.4. Safety Awareness Summaries (as required)
- 2.2.4.5. Any crosstell concerning squadron or unit related weapons safety information.
- 2.2.4.6. Current organizational command policy letters.
- 2.2.5. Contact 51 FW weapons safety office to arrange for training on their duties and responsibilities. Training must be accomplished no later than 30 days after appointment.
 - 2.2.5.1. Act as their commander's representative on all matters affecting explosives or hazardous materials transportation safety.
 - 2.2.5.2. Keep their commander informed of all inspection discrepancies, unsafe working conditions or practices, and other cross-tells that could affect the unit's explosives or hazardous materials transportation program.
 - 2.2.5.3. Ensure all munitions devices used for training are activated only in approved areas on Osan AB and that all munitions residue (packing materials, empty munitions cases, boxes, items, etc.) are returned to the Munitions Flight, for inspection, certification, or reuse.
 - 2.2.5.4. Report mishaps/incidents or deficiencies involving explosives to 51 FW weapons safety office through the Osan command post immediately.
- 2.3. 51st Fighter Wing Command Post (CP) . The command post will make weather notifications as outlined in OSANABI 15-101, *Weather Support for Osan Air Base* (Figure A2.1), Weather Watch, Warning, Advisory (WWA) Dissemination.
- 2.4. MOC will coordinate with wing weapons safety on maintenance functions that have an involvement with or impact on munitions or hazardous cargo loads.
 - 2.4.1. Weapons Expediter will ensure the MOC is notified of the following situations:
 - 2.4.1.1. When each aircraft is loaded or unloaded with Hazard Class/Division (HC/D) 1.1, 1.2.X, 1.3, or 1.4 explosives (1.4 in excess of 1,000 pounds gross weight), and provided MOC the following:
 - 2.4.1.2. Aircraft tail number.
 - 2.4.1.3. Parking location.
 - 2.4.1.4. Quantity and type of explosives involved.
 - 2.4.1.5. Prior to movement of explosives into or out of HASs or hardstands, as well as the projected destination.
 - 2.4.1.6. MOC will notify the Fire Alarm Communication Center and provide them with the above information.
 - 2.4.1.7. Notify all applicable agencies prior to start of Tier 2 operations.
- 2.5. 51st Operations Group will:
 - 2.5.1. Commander. Coordinate with 51 FW weapons safety for current or future explosive mission changes and needs.

2.5.2. 51 OSS/Weather Flight. Notify the 51 FW Command Post (51 FW/CP) upon receipt of a Lightning Watch/Warning.

2.5.3. 51 OSS/Standardization and Evaluation. Advise and coordinate with 51 FW weapons safety office on all operational plans, special plans, mobility or deployment tasking involving explosives and explosives-laden and combat aircraft parking.

2.5.4. 51 OSS/Airfield Manager will:

2.5.4.1. Ensure explosive loaded cargo or combat aircraft are parked on designated explosive sited locations. Contact safety office with any concerns for parking explosive loaded aircraft.

2.5.4.2. Coordinate with the 51 FW/CP when aircraft loaded with explosives arriving or departing Osan AB.

2.5.4.3. Ensure hazardous cargo or combat-loaded aircraft grounding points are available at all parking locations.

2.5.4.4. Provide advance notification and aircraft parking location to Transient Alert.

2.6. 51st Maintenance Group (51 MXG) will:

2.6.1. 51st Maintenance Group Commander. Coordinate with 51 FW weapons safety for current or future explosive mission changes and needs.

2.6.2. 51 MXG/MUNS will:

2.6.2.1. Coordinate PQDRs and AFTO Forms 22, *Technical Manual (TM) Change Recommendation and Reply*, and reply regarding explosives and munitions with the 51 FW weapons safety office and Quality Assurance.

2.6.2.2. Ensure information on restricted, suspended, and released explosives and ammunition lot numbers is distributed to all affected host or tenant units.

2.6.2.3. Ensure proper facilities are available and used for ammunition or explosives receipt, issue, storage, and inspection.

2.6.2.4. Upon request, provide the 51 FW weapons safety office a copy of all authorized ammunition inspection and certification personnel.

2.6.2.5. Ensure all custody or supply point accounts comply with established safety standards for transportation of explosives or ammunition prior to issue transactions. Standards include proper fire symbols on vehicles, ammunition and explosives compatibility, fire extinguishers, and any other applicable safety standards.

2.6.3. 51 MXS/Transient Alert will:

2.6.3.1. Ensure personnel are trained to identify and comprehend the hazard potential involving parking and ground handling of explosives-laden cargo and transiting combat aircraft.

2.6.3.2. Provide aircraft grounding, chocks, and fire extinguisher(s) for aircraft transiting Osan AB.

2.7. 51st Mission Support Group will:

2.7.1. 51st Mission Support Group Commander. Coordinate with 51 FW weapons safety for current or future explosive mission changes and needs.

2.7.2. 51st Security Forces Squadron will:

2.7.2.1. Provide authorized entrance/exit and escort of surface carriers transporting explosives/dangerous materials on Osan AB to ensure approved routing to proper destinations.

2.7.2.2. Ensure surface carriers loaded with explosives or other hazardous materials enter or exit Osan AB via the J.R Morin Gate.

2.7.2.3. Notify Surface Freight, Fire and Emergency Services Flight, Munitions Control, and 51 FW weapons safety office personnel when explosive-loaded vehicles arrive at Osan AB (except OSAN AB units).

2.7.2.4. Coordinate all tactical or training exercises involving explosives with wing weapons safety.

2.7.2.5. Coordinate all AF Forms 2047 for compliance with resource protection standards.

2.7.2.6. Ensure explosives dog handlers coordinate with the Fire and Emergency Services Flight and wing weapons safety prior to conducting bomb dog training.

2.7.3. 51st Civil Engineer Squadron will:

2.7.3.1. Ensure the Fire and Emergency Services Flight maintains a base map or computerized display that identifies all base explosive storage locations and their applicable fire and chemical hazard symbols, to include all licensed locations.

2.7.3.2. Ensure the Fire and Emergency Services Flight maintains current pre-fire plans in accordance with AFI 32-2001, *Fire and Emergency Services (F&ES) Program*.

2.7.3.3. Ensure the dispatcher's log identifies fire and chemical hazard symbol changes to explosives locations, notification of inbound or outbound and transiting hazardous cargo, combat-configured aircraft, inbound hazardous cargo-loaded vehicles, and bomb detector dog training.

2.7.3.4. Ensure Fire and Emergency Services Flight coordinates on all requests to weld, cut, or otherwise use flame-producing equipment around explosives or munitions stocks. Coordinate and maintain copies of all AF Forms 2047.

2.7.3.5. Coordinate with 51 FW weapons safety office during update of master plan drawings to ensure explosives quantity distance criteria is complete and accurate for all existing or proposed facilities within explosive clear zones. Quantity distance zones will not be included for proposed facilities until USAF site plan approval has been received.

2.7.3.6. Coordinate all AF Forms 103, *Base Civil Engineering Work Clearance Request*, and DD Forms 1391, *FY-Military Construction Project Data*, that fall within explosive clear zones with wing weapons safety.

- 2.7.3.7. Ensure the Civil Engineering Exterior Electrical Shop maintains on file a record of all ohm meter readings for each test point tested in munitions storage areas (e.g. Alpha Site, Delta Site, and Preload Area). Written reports reflecting actual meter readings will be provided to the facility or area custodian for all lightning protection and static ground test points.
- 2.7.3.8. Maintain streets and roads used as primary and alternate explosive routes and roads within the munitions storage areas. Roads must be smooth and meet all-weather use standards.
- 2.7.3.9. Coordinate all tactical or training exercises involving explosives with the 51 FW weapons safety office to ensure compliance with established safety standards.
- 2.7.3.10. Ensure GeoBase and Project Management sections work closely with wing weapons safety to provide necessary maps for explosive site plans.
- 2.7.4. 51st Communications Squadron will:
- 2.7.4.1. Provide a listing of all on-base RF transmitters to the weapons safety office annually. This listing will include the location of each transmitter, frequency (MHz), output wattage, and antenna gain (db).
- 2.7.5. 51st Logistics Readiness Squadron will:
- 2.7.5.1. Coordinate terminal facility guide changes regarding explosives capabilities with the 51 FW weapons safety office.
- 2.7.5.2. Ensure airfreight procedures have been developed for handling military or contract hazardous materials air shipments.
- 2.7.5.3. Ensure vehicle inspections for all explosives and hazardous materials-loaded vehicles, arriving or departing Osan AB are conducted in accordance with DESR 6055.09_AFMAN 91-201 V1.E6.42 and DTR 4500.9-R, *Defense Transportation Regulation*, part II, chapter 204.
- 2.7.5.4. Provide guidance to all agencies *concerning* compliance with Department of Transportation and DoD hazardous material placarding, labeling, packing, and shipping regulations.
- 2.7.6. 731st Air Mobility Squadron (731 AMS) will:
- 2.7.6.1. Coordinate with all appropriate base agencies on inbound or outbound explosives-loaded cargo aircraft.
- 2.7.6.1.1. Provide munitions placarding support for explosives-loaded cargo aircraft transiting Osan AB.
- 2.7.6.2. Ensure personnel are trained to prepare, process, and dispatch explosives and hazardous cargo departure messages.

3. Maintenance and Repair of Explosive Facilities and Equipment.

3.1. Reference AFI 32-1020, Planning and Programming Built Infrastructure Projects, paragraph 2.5.1 and **attachment 4** for definitions of maintenance and repair of explosive facilities and equipment. For construction activities refer to DESR6055.09_AFMAN 91-201.

3.2. Supervisory and weapons safety personnel will determine, based on a risk assessment, whether explosives must be removed prior to performing maintenance and repair of explosives facilities, or maintenance and repair of equipment in explosives facilities.

3.3. Document a risk assessment, including control measures taken and brief maintenance personnel on the hazards involved and precautions needed to perform the work safely, and actions to take in the event of an accident. This includes self-help projects. For risk assessments where non-concurrence of control measures would lead to overall risk of medium or low, 51 FW/SE Chief of Safety may assume risk. Risk levels of high and extremely high will require justification from the responsible Commander and approval by 51 FW/CC.

4. Tier Two Operations Memorandum.

4.1. Units/Agencies will initiate routing of the Tier Two Operations Memorandum two weeks prior to the start of the a training, exercise, and/or real world event requiring any or all portions of Tier Two operations.

4.2. The Tier Two Operations Memorandum and staffing sheet can be found on the 51 FW Weapons Safety SharePoint at the following link:
<https://usaf.dps.mil/sites/osan/51FW/51FWSTAFF/51FWSE/WeaponsSafety/Shared%20Documents/Forms/AllItems.aspx?viewid=f08547c3%2D0025%2D42b4%2Daa47%2D2bd963f51616&id=%2Fsites%2Fosan%2F51FW%2F51FWSTAFF%2F51FWSE%2FWeaponsSafety%2FShared%20Documents%2FTIER%20TWO%20Operations%20Acknowledgement%20Staffing%20Sheet>

JOHN F. GONZALES, Colonel, USAF
Commander

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 32-1020, *Planning and Programming Built Infrastructure Projects*, 18 December 2019

AFI 32-2001, *Fire and Emergency Services (F&ES) Program*, 28 September 2018

AFI 33-322, *Records Management and Information Governance Program*, 23 March 2020

AFI 91-202, *The US Air Force Mishap Prevention Program*, 12 March 2020

AFI 91-204, *Safety Investigations and Reports*, 27 April 2018

AFMAN 11-218, *Aircraft Operations and Movement on the Ground*, 5 April 2019

AFMAN 24-306, *Operation of Air Force Government Motor Vehicles*, 30 July 2020

AFMAN 32-1065, *Ground & Electrical Systems*, 17 Jul 2020

AFPD 91-2, *Safety Programs*, 3 September 2019

DESR6055.09_AFMAN91-201, *Explosives Safety Standards*, 28 May 2020

DTR4500.9-R, *Defense Transportation Regulation*, 1 May 2016

AFI 91-202_PACAFSUP, *The US Air Force Mishap Prevention Program*, 3 May 2017

AFMAN 91-201_PACAFSUP, *Explosives Safety Standards*, 10 October 2017

OSANABI 13-204, *Airfield Operations and Local Flying Procedures*, 22 Jan 2020

OSANABI 15-101, *Weather Support for Osan Air Base*, 15 July 2019

OSANABI 21-112, *End of Runway (EOR)/Explosive Loaded Aircraft, Hung Ordnance/Gun System Malfunction Procedures, and Hung Ordnance/Gun System Malfunction Impoundment*, 23 January 2019

OSANABI 24-601, *Transportation Traffic Management*, 9 Jan 2020

AFI 21-101_PACAFSUP_OSANABSUP, *Aircraft and Equipment Maintenance Management*, 3 April 2019

Adopted Forms

AF Form 103, *Base Civil Engineering Work Clearance Request*

AF Form 457, *USAF Hazard Report*

AF Form 847, *Recommendation for Change of Publication*

AF Form 2047, *Explosive Facility License*

AFTO Form 22, *Technical Manual (TM) Change Recommendation and Reply*

DD Form 1391, *FY-Military Construction Project Data*

Abbreviations and Acronyms

51 FW/SEW—51 FW Weapons Safety
51 MXG—51st Maintenance Group
731 AMS—731st Air Mobility Squadron
AA&E—Arms, Ammunitions & Explosives
ADA—Air Defense Artillery
ADWSR—Additional Duty Weapons Safety Representative
AFRIM—Air Force Records Information Management System
AUR—All Up Round
CoP—Community of Practice
CP—Command Post
CSO—Concurrent Servicing Operations
CWDE—Chemical Warfare Defense Ensemble
DDESB—Department of Defense Explosive Safety Board
DoD—Department of Defense
ECC—Emergency Communications Center
EMR—Electro-Magnetic Radiation
HAS—Hardened Aircraft Shelter
HC/D—Hazard Class/Division
IBD—Inhabited Building Distance
IMD—Intermagazine Distances
MASO—Munitions Accountability Systems Officer
MOC—Maintenance Operation Center
MOU—Memorandum of Understanding
NCE—Nuclear Certified Equipment
NEW—Net Explosive Weight
OI—Operating Instructions
OPR—Office of Primary Responsibility
PQDR—Product Quality Deficiency Report
QD—Quantity-Distance
RDS—Records Disposition Schedule
WWA—Watch, Warning, Advisory

Attachment 2**OSAN AB COMPENSATORY MEASURES****A2.1. OSAN AB Compensatory Measures.****Figure A2.1. OSAN AB Compensatory Measures.**

Osan-07-S49-CM001: When Arms, Ammunitions & Explosives (AA&E) loaded aircraft are present at 6060, road 7503-RD will be used by related personnel only. A gate is installed on the road outside of the Inhabited Building Distance (IBD) arc. This gate will be closed when AA&E loaded aircraft are present at facility 6060.

Osan-07-S49-CM002: When AA&E loaded aircraft are present at 6060, facility 11672, Engine Trim/Power Check Pad, will not be used.

Osan-15-S001 – S033-CM001: The AN/FQM Digital Ionosphere Sounder System will not be powered while explosives are present at ISO Pad 101A.

Osan-15-S001 – S033-CM002: Concurrent use of Facilities 101A, S-30, and S-36 is not authorized when facilities are at their maximum sited capabilities. Concurrent use may be authorized at reduced weights provided intermagazine distances (IMD) are maintained.

Osan-15-S045 – S066-CM001: All combat aircraft parked in spots 7001 through 7022 must be removed from the ramp and placed inside the HASs to prevent intermagazine distance violations from HASs to the combat aircraft parked on the ramp.

Osan-15-S045 – S066-CM002: Golf course holes “1 West” through “9 West” and facility 7407 must be closed and access restricted to all personnel not related to the explosives mission.

Osan-15-S067 - S073, S079 - S088-CM001: The 51 FW/CC has directed the implementation of compensatory measures identified in the Osan AB (Draggin’s Lair) 15-CM001 spreadsheet to prevent violations to Quantity-Distance (QD) criteria. During day-to-day operations the explosives weights in the HAS will be limited as specified to prevent intermagazine distance violations to the CAPAs on the ramp. During exercise, contingency and war plan operations the aircraft on the ramp will be moved into the HASs.

Osan-15-S224 – S238, S241 and S247-CM001: Non-explosives loaded combat aircraft are routinely parked on ramps 1728/29PK1 and 1731/32PK1. In certain locations, the minimum IMD separation is not provided from explosives-loaded HASs. In order to maintain the required separation, my staff will develop HAS NEWQD limitations to ensure IMD is provided to these aircraft.

Osan-15-S224 – S238, S241 and S247-CM002: Golf course hole “5 West” must be closed and personnel access restricted when explosives are present at revetment A11 and the required QD separation is not provided.

Osan-15-S248 – S257-CM001: Non-explosives loaded combat aircraft will be removed/relocated from 1728/29PK1 when explosives are introduced in 3rd Gen Flows 1690 and 1897.

Osan-15-S260 – S267, S270 – S283, S285 – S291-CM001: Golf course driving range (7407) and vehicle parking areas (7407PK2 and 7407PK3) must be closed and access restricted to all personnel not related to the explosive mission when explosives are present at HASs 1664 through 1672.

Osan-15-S260 – S267, S270 – S283, S285 – S291-CM002: Aircraft parking on ramps 1728/29PK1 must be removed/relocated when explosives are introduced in Bravo Diamond HASs 1680 through 1684 to provide the minimum IMD protection.

Osan-18-S002-CM001: Explosives will not be allowed into HASs 1663, 1664, 1665, 1666, 1667, 1668, 1669, 1670, 1671, and 1672 during operations other than wartime contingency. This compensatory measure has been directed to ensure the AGE WRM storage meets minimum separation requirements from surrounding hardened aircraft shelters.