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Safety

**WEAPONS SAFETY PROGRAM
MANAGEMENT**

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This implements Air Force Policy Directive (AFPD) 91-2, *Safety Program*, 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.

SUMMARY OF REVISIONS

This revision incorporates changes to AFMAN 91-201/PACAF Sup 1. A bar (|) indicates revision from the previous edition.

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1. Program Description:

1.1. **Weapon Safety Program Management.** IAW AFI 91-202, *The US Air Force Mishap Prevention Program*, the Weapons Safety Program at Osan AB is comprised of two disciplines: explosives and missile safety. The wing weapons safety office is host and coordinates all weapons safety requirements for the base. All tenant units must align their safety programs with the 51 FW weapons safety office.

1.2. **General Explosive Safety Standards.** Air Force explosive safety standards are in AFMAN 91-201, *Explosives Safety Standards*.

1.3. **Additional Duty Weapons Safety Representative (ADWSR) Appointment.** IAW AFI 91-202/PACAF Sup 1, 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 and alternate ADWSR in grade E-5 or above and send letter to 51 FW/SEW with a copy filed in the unit's weapons safety management book. 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. **Explosive Safety Program.** Involves all materials under the definition for explosives, which are regulated by Public Law and the Department of Defense. This program also encompasses fighter, rotary, and the airlift of hazardous materials and operations incidental thereto. 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. Explosive safety program requirements are outlined in AFI 91-202, paragraph 10.5.

1.5. **Missile Safety Program.** Weapons safety program requirements are outlined in AFI 91-202, paragraph 10.6.

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

1.5.1.1. Missile drop criteria, the possible cracking of solid propellants causing detonations when launched.

1.5.1.2. Missile container width, forklift tines extending beyond container into rear stacks causing these stacks to turn over.

1.5.1.3. Importance of using qualified forklift spotters.

1.6. **Developing Explosive Operating Instructions.** If technical orders or safety briefings cover all information listed in AFMAN 91-201, paragraph 2.3 and 2.4, locally developed instructions are not required. However, ADWSRs 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.

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 wing weapons safety office. The safety office will prepare an example AF Form 2047, **Explosive Facility License**, IAW AFMAN

91-201, paragraph 2.35, and the ADWSR or unit representative 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 Department) and Munitions Operations (AFK). 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 AFI 32-1065, *Grounding Systems*, Table 1, line 12b.

1.8. Explosive Safety Training. As stated in AFMAN 91-201, paragraph 2.2, "Personnel who work with explosives will be trained and qualified in the tasks to be performed" by their ADWSR or through a formal course. "They must understand all safety standards, requirements, and precautions that apply to their operations. The supervisor must be knowledgeable of all hazards involved in the operation, convey emergency procedures to the workers and visitors, and maintain strict housekeeping standards. The supervisor must also know what steps to take when abnormal conditions arise." Commanders will ensure the following items are accomplished:

1.8.1. Initial and annual explosive safety training for all personnel (supervisory and non-supervisory) who operate, handle, transport, maintain, load/unload, or dispose of explosives IAW AFI 91-202, paragraph 10.10.2.

1.8.2. Ensure all 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 training lesson plans/guides and test for explosive vehicle/MHE operators are developed and coordinated through wing weapons safety prior to use.

1.8.4. 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. Training will be documented. Lesson plans/guides will be developed by the unit, coordinated through wing weapons safety office, and used to conduct this training.

1.8.4.1. Develop lesson plans and tests for explosive/missile safety training. All lesson plans must be approved by 51 FW/SEW prior to implementation and annually thereafter. Individuals receiving explosive/missile safety training must be given a closed-book test at the conclusion of initial and annual training. Develop two "distinctively different" explosive/missile safety tests. Minimum passing grade is 80% IAW AFI 91-202/PACAF Sup 1, paragraph 10.10.3.1 with a 100% critique of all missed items, and followed by a retest using different version of the test. Lesson plans and tests must be approved by 51 FW/SEW prior to use and annually thereafter. Lesson plans will include, as a minimum:

1.8.4.1.1. Individuals Role and Specific Responsibilities.

1.8.4.1.2. Toxic, Explosive, and Hazardous Aspects of the Specific Weapon System (e.g., propellants, radiation, electrical, etc.).

1.8.4.1.3. Missile Safety (If applicable).

1.8.4.1.4. Safety Equipment.

1.8.4.1.5. Handling Explosives.

1.8.4.1.6. Transportation of Explosives (include unique problem areas such as trailer turning radii, tie down procedures, explosive placards, etc.).

1.8.4.1.7. Emergency Actions.

1.8.4.1.8. Mishap/Hazard Reporting Program.

1.8.4.1.9. Fire Prevention.

1.8.4.1.10. Fire Symbols.

1.8.4.1.11. Chemical Hazard Symbols.

1.8.4.1.12. Maintenance on Explosive Loaded Aircraft (if applicable).

1.8.4.1.13. Lessons Learned (past local and like-unit mishaps, HAPs, or crosstell).

1.9. Local Purchase of Munitions. Local purchase of commercial explosives or munition items is prohibited unless they are approved for local purchase by Ogden Air Logistics Center (OO-ALC). Contact the Munitions Flight (51 MXS/LGMW) for guidance. Submit requests for approval according to AFI 21-202, *Combat Ammunition System Procedures*, paragraph 3.17.

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 at 784-4804. Provisions of AFMAN 91-201, paragraph 2.17, DoD 6055.9-STD, paragraph C9.8 and AFMAN 24-306 will be adhered to before conducting these operations.

1.10.1. During training operations, Military Working Dog personnel will not disperse more than seven (7) pounds of explosives in any one structure (AFMAN 91-201).

1.10.2. All non-essential personnel must be evacuated at a minimum distance of 100 feet.

1.10.3. Minimize the number of samples and the quantity of explosives for each sample.

1.10.4. Deploy samples a sufficient distance apart to prevent an explosion from propagating from one to another.

1.10.5. Do not use blasting caps, squibs, explosive detonators, or any initiating explosive for training.

1.10.6. Do not place explosives near any heat or spark producing items such as bare electrical wiring, radiators, electric heaters, vents, or any other source of potential initiation.

1.10.7. Do not place explosives in metal containers or other confinements that would act as a source of fragments in the event of an accidental explosion.

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 are identified on the Base Explosive Map D-8, which can be obtained through CE engineering office.

1.11.1. Primary Route for Surface/Commercial Carriers and Patriot Missile Batteries. All explosives, ammunition (to include small arms), or other hazardous material transported by surface vehicles will enter or exit Osan AB via the Doolittle Gate and proceed to East Perimeter Road. Turn right on East Perimeter and proceed until you come to the munitions storage area. Turn right and enter the Munitions Storage or patriot areas. While on Osan AFB, Munitions Flight or Transportation Squadron personnel will escort all surface explosive carriers, except patriots.

1.11.2. Alternate Route for Surface/Commercial Carriers and Patriot Missile Batteries. If for some unforeseen reason the primary route cannot be used, surface shipments will enter or exit Osan AB via the 180 Hill Gate, and continue until you come to South Perimeter Road. Turn left onto South Perimeter and proceed until you come to the Munitions Storage Area. Turn left and enter the Munitions Storage or patriot areas. While on Osan AFB, Munitions Flight or Transportation Squadron personnel will escort all surface explosive carriers, except patriots.

1.11.3. Primary Explosive Route to/from the Munitions Storage Area from/to A-Site or Osan Magnum. Enter the 180 Hill Gate and continue until you come to South Perimeter Road. Turn left onto South Perimeter and proceed until you come to the Munitions Storage Area. Turn left and enter the Munitions Storage Area. Munitions personnel transporting explosives will not be escorted by Security Forces personnel.

1.11.4. Alternate Explosive Route to/from the Munitions Storage Area from/to A-Site or Osan Magnum. Enter Doolittle Gate and proceed to East Perimeter Road. Turn right on East Perimeter and proceed until you come to the munitions storage area. Turn right and enter the Munitions Storage Area. Munitions personnel transporting explosives will be not escorted by Security Forces personnel.

1.11.5. Primary Route to the Flightline to/from the Munitions Storage Area. Exit the Munitions storage Area and turn left onto South Perimeter Road. Stay on South Perimeter Road until you come to a fork in the road. Take the middle fork and proceed to the Preload Area and onto to the flightline.

1.11.6. Alternate Route to the Flightline to/from Munitions Storage Area. Exit the Munitions Storage Area and turn left onto South Perimeter Road; stay on Perimeter Road. Make a right turn onto flightline road just prior to building 1902.

1.12. **Inspection of Incoming Shipments.** All incoming explosive loaded vehicles that did not originate from Osan AB, will be inspected at vehicle inspection points (Doolittle and 180 hill gates) prior to further movement on base.

1.12.1. 51 TRANS will inspect all commercial and military motor vehicles carrying explosives. Exception: Security Forces, 1/43 ADA Patriot Batteries (Charlie/Delta), 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 department will be notified if any vehicle found or suspected to be in a hazardous condition. Once the vehicle is safe to move, it will be moved to the Hot Cargo Pad (HCP) until further investigation allows the shipment to proceed.

1.13. **Explosives-Loaded Aircraft Parking.** Park explosives-loaded aircraft in accordance with AFI 32-1123, *Airfield and Heliport Planning and Design*, PACAFI 21-101/51FW Sup 1, *Objective Wing Aircraft Maintenance*, and 51 FWI 13-201, *Osan Air Base Airfield Operations Instruction*. 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) and [Attachment 2](#) of this instruction.

1.14. **Hung Ordnance and Jammed Gun Procedures.** Follow guidance outlined in PACAFI 21-101/51 FW Sup 1.

1.15. **Authorized Munitions Storage Areas.** Authorized munitions storage locations are listed in [Attachment 3](#) to this instruction.

1.16. **Safety Inspections.** Safety inspections help identify hazards and measure compliance with safety program requirements outlined in AFI 91-301, *Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program*. 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 other wise 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.** All cellular telephones and two-way type radios must be seaparaphted from Electro-Explosive Devices (EEDs) by at least 10 feet when transmitting.

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. Exposed explosives constitute open or ruptured rounds or when munitions are exuding explosive materials. Explosives in the 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. AFMAN 91-201, paragraph 2.51.1, and 2.51.2.

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 paragraph [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 wing 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 wing weapons safety office and the Osan Command Post when mishaps occur involving explosives or transportation of explosives. Prompt notification will enable the Wing Weapons Safety Manager to advise responsible commanders of report ability 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 approval.
- 2.1.8. Initiate Product Quality Discrepancy Reports (PQDR) IAW TO 00-35D-54 for defective or malfunctioning explosives/components discovered during use, handling, or storage.
- 2.1.9. Ensure the Maintenance Operation Center (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 (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 in to or out of HASs or hardstands, as well as the projected destination.
- 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 AFMAN 91-201, paragraph 2.3 and 2.4.
- 2.1.12. Coordinate current or future explosive mission changes and needs with wing weapons safety.

2.2. Additional Duty Weapons Safety Representatives (ADWSR):

- 2.2.1. Unit commanders will appoint an officer, NCO in the grade of E-5 or above, or qualified civilian employee and an alternate to represent them in all matters affecting explosives or hazardous materials safety. 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. Appoint a replacement when current ADWSRs are within 30 days of PCS or sooner.
 - 2.2.1.1. Persons selected must have at least nine months retainability.
 - 2.2.1.2. Send letter of appointment to 51 FW/SEW with a copy filed in the unit's weapons safety program management book. Include individual's name, rank, office symbol, DEROS, and duty phone. Email addresses are also required, since much information is passed out via

this medium.

2.2.2. Maintain a weapons safety management book. The book will be sectioned as follows:

2.2.2.1. TAB A – Letters:

2.2.2.1.1. Safety Policy Letters (Wing, Squadron, etc.).

2.2.2.1.2. ADWSR's Letter of Appointment.

2.2.2.1.3. ADWSR Memorandum of Training (from 51 FW/SEW).

2.2.2.2. TAB B - Explosive Safety Training:

2.2.2.2.1. Explosive Safety Lesson Plan and Tests.

2.2.2.2.2. Documentation (Log/CAMS Run/MMICS Run)/Results of Tests.

2.2.2.3. TAB C - Local Operating Instructions (OI).

2.2.2.4. TAB D - Explosive Storage License (If required).

2.2.2.5. TAB E - Annual Inspections/Corrective Actions.

2.2.2.6. TAB F - Spot Inspections/Corrective Actions - Spot Inspection Log.

2.2.2.7. TAB G - Mishap Reporting Procedures.

2.2.2.7.1. Local Mishap Reports.

2.2.2.7.2. Crossfeed/Outside Like-Unit Mishap Reports.

2.2.2.8. TAB H - Hazard Reporting Procedures - Copies of Hazard Reports (AF Form 457).

2.2.2.9. TAB I - Weapons Safety Evaluation Checklist.

2.2.2.10. TAB J - General Correspondence/Miscellaneous Information.

2.2.2.10.1. News Letters.

2.2.2.10.2. AMMO Grams.

2.2.2.10.3. Commander's Weapons Safety Training Guide.

2.2.2.10.4. ADWSR's Training Guide.

2.2.2.10.5. Explosive Safety Guides/Other Material.

2.2.3. Perform monthly spot inspections of explosive operating locations and storage facilities. Document the spot inspection with any corrective actions and maintain in the weapons safety management book.

2.2.4. Keep the commander informed on the status of his/her explosive safety program at least quarterly.

2.2.5. Maintain explosive/weapons safety bulletin boards. Bulletin boards should be located near operating locations, work centers, or break areas. Boards should be current and require these minimum items:

2.2.5.1. Current 51 FWVA 91-101, *Weapons Safety Representatives*.

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

- 2.2.5.3. Current Weapons Safety Communiqués and Newsletters.
- 2.2.5.4. Safety Awareness Summaries (as required).
- 2.2.5.5. Any other information that would emphasize and alert personnel to the dangers and importance of weapons safety.
- 2.2.6. Develop lesson plans and tests in accordance with paragraph 3.1.4.1 of this instruction.
 - 2.2.6.1. Contact wing weapons safety office to arrange for training on their duties and responsibilities. Training will normally be accomplished within 30 days after appointment.
 - 2.2.6.2. Act as their commander's representative on all matters affecting explosives or hazardous materials transportation safety.
 - 2.2.6.3. 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.
 - 2.2.6.4. 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.
 - 2.2.6.5. Report mishaps/incidents or deficiencies involving explosives to wing weapons safety office through the Osan command post immediately.
- 2.3. Wing Weapons Safety Manager will:
 - 2.3.1. Plan, coordinate, and direct the Wing Explosives, Range, and Hazardous Materials Transportation Safety Programs for all wing and tenant units on Osan AB.
 - 2.3.2. Serve as a member on committees, boards, or councils and attend meetings, conferences or seminars, which address explosives or hazardous materials transportation safety.
 - 2.3.3. Coordinate on all locally developed (wing/base) plans, publications, or policies concerning explosives and hazardous materials transportation safety.
 - 2.3.4. Advise commanders of factors that would impact on their assigned mission as related to explosives or hazardous materials transportation safety.
 - 2.3.5. When emergency conditions or operational necessity dictates, advises the wing commander of his or her waiver authority and use of reduced quantity distance criteria IAW AFMAN 91-201 and AFI 91-202.
 - 2.3.6. Review civil engineer site or construction plans and work orders for consideration of explosives safety standards.
 - 2.3.7. Coordinate on all procurement actions concerning local purchase munitions and all contracting actions, which impact explosives facilities.
 - 2.3.8. Coordinate on host-tenant or inter-service agreements, which indicate wing explosives safety support.
 - 2.3.9. Investigate explosives/hazardous materials mishaps and function as the explosives safety member on safety investigation boards appointed IAW AFI 91-204.

2.3.10. Maintain information on higher headquarters or DoD Explosives Safety Board Inspections or Surveys to include all findings and corrective actions taken.

2.3.11. Train unit ADWSR's.

2.3.12. Approve/disapprove requests for and ensure compliance with explosives facility-licensing requirements.

2.3.13. Review/coordinate unit lesson plans involving explosives training.

2.3.14. The base explosives location map (D-8) will be reviewed annually. Coordinating agencies will include 51 FW/CC, 51 LG/CC, 51 OG/CC, 51 SPTG/CC, and 51 FW/SE. This explosives location map will follow the requirements established in AFI 91-202, paragraph 10.4.11.

2.3.15. All base and tenant unit publications (i.e., OI's, checklists, exercise and operational plans, instructions, AF Forms 332, **Base Civil Engineer Work Request**, and 457, support agreements, and HAZMAT and disaster response required by AFI 32-4002) relating to explosive safety will be coordinated through the weapons safety office.

2.4. **51st Fighter Wing Command Post (CP)**. The command post will notify all wing and tenant units having an explosive mission when lightning is within 5 nautical miles of Osan AB. The 51 FW/CP will also notify these same units upon the cancellation of Lightning Watches/Warning.

2.4.1. Maintenance Operations Center (MOC). Will coordinate with wing weapons safety on maintenance functions that have an involvement with or impact on munitions or hazardous cargo loads, as well as the following:

2.4.1.1. Prior to authorizing any aircraft on the engine test pad (near the fire training pit), ensure munitions have been removed from buildings 1852, 1855 and 1856. Establish a checklist to include requirements, which will ensure notification of all required agencies to preclude violations of explosive safety standards.

2.4.1.2. Ensure the Maintenance Operation Center (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 (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 in to or out of HASs or hardstands, as well as the projected destination.

2.5. **51st Operations Group:**

2.5.1. Commander will coordinate with the wing weapons safety for current or future explosive mission changes and needs.

2.5.2. 51 OSS/Weather Flight will notify the 51 FW/CP upon receipt of a lightning watch/warning.

2.5.3. Standardization and Evaluation will advise and coordinate with wing 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 (see **Attachment 2** for authorized parking locations).

2.5.4.2. Coordinate with the Osan command post 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 Logistics Group:

2.6.1. Commander will coordinate with the wing weapons safety for current or future explosive mission changes and needs.

2.6.2. 51 MXS/Munitions Flight will:

2.6.2.1. Coordinate PQDR's and AFTO Forms 22, **Technical Order Improvement Report and Reply**, regarding explosives and munitions with the Wing 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 wing 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.

2.6.2.6. Establish procedures for the local purchase of commercial explosives in accordance with AFI 21-202 and coordinate with the Weapons Safety Office.

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.

2.6.4. 51st Transportation Squadron will:

2.6.4.1. Coordinate terminal facility guide changes regarding explosives capabilities with the Wing Weapons Safety Office.

2.6.4.2. Coordinate with the Osan Command Post when aircraft or vehicles loaded with non-nuclear munitions are arriving or departing Osan AB.

2.6.4.3. Ensure airfreight procedures have been developed for handling military or contract hazardous materials air shipments.

2.6.4.4. Coordinate operating requirements with Osan Command Post when aircraft loading and unloading activities involve explosives or hazardous materials.

2.6.4.5. Ensure vehicle inspections for all explosives and hazardous materials-loaded vehicles, arriving or departing Osan AB are conducted in accordance with AFMAN 91-201 and DOD 4500.9R, part II, Chapter 204, paragraph I.

2.6.4.6. Provide guidance to all agencies concerning compliance with Department of Transportation and DoD hazardous material placarding, labeling, packing, and shipping regulations.

2.6.4.7. Complete and make distribution of packaging and handling deficiency reports in accordance with AFJMAN 23-215, *Reporting of Supply Discrepancies*, when explosives or other hazardous materials are involved.

2.7. 51st Support Group:

2.7.1. Commander will coordinate with the wing 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 Doolittle or 180 Hill Gates only. If surface carriers arrive at the main gate, vehicles will be inspected and then escorted to Doolittle Gate for any additional processing or on to their final destination.

2.7.2.3. Notify Surface Freight, Fire Department, Munitions Control, and Wing Weapons Safety 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 department and wing weapons safety prior to conducting bomb dog training.

2.7.3. Combat Arms Training and Maintenance Unit will:

2.7.3.1. Ensure strict enforcement of firearms and range safety rules.

2.7.3.2. Maintain ranges in a manner consistent with Air Force standards.

2.7.4. 51st Civil Engineer Squadron will:

2.7.4.1. Ensure the fire station 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.

2.7.4.2. Ensure the fire station maintains current prefire plans in accordance with AFI 32-2001.

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

2.7.4.4. Ensure fire protection branch 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.

2.7.4.5. Coordinate with wing 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.

2.7.4.6. Coordinate all AF Form 332, AF Form 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.

2.7.4.7. 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 (i.e., Osan Magnum, Alpha Site, Delta Site, and Preload Area) or other appropriate facilities. Written reports reflecting actual meter readings will be provided to the facility or area custodian for all lightning protection and static ground test points.

2.7.4.8. 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.

2.7.4.9. Coordinate all tactical or training exercises involving explosives with the wing weapons safety office to ensure compliance with established safety standards.

2.7.4.10. Ensure the mapping section works closely with wing weapons safety to provide necessary maps for explosive site plans.

2.7.5. 51st Communications Squadron will 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).

2.8. **731st Air Mobility Squadron will:**

2.8.1. Coordinate with all appropriate base agencies on the inbound or outbound explosives loaded cargo aircraft. Provide munitions placarding support for explosives-loaded cargo aircraft transiting Osan AB.

2.8.2. Ensure personnel are trained with preparing, processing, and dispatching of explosives and hazardous cargo departure messages and this instruction.

DAVID E. CLARY, Brigadier General, USAF
Commander

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****Abbreviations and Acronyms***

AF—Air Force

AFOSH—Air Force Occupational Safety and Health

AGE—Aerospace Ground Equipment

AMRAAM—Advanced Medium-Range, Air-to-Air Missile

AUR—All-Up-Round

CAPA—Combat Aircraft Parking Area

CBU—Cluster Bomb Unit

DDESB—DOD Explosives Safety Board

DoD—Department of Defense

DOT—Department of Transportation

EED—Electro-explosive Devices

EOR—End of Runway

ES—Exposed Site

ESP—Explosive Site Plan

FACC—Fire Alarm Communication Center

GOV—Government Owned Vehicle

GP—General Purpose

HARM—Hi-Speed, Antiradiation Missile

HAS—Hardened Aircraft Shelter

HE—High Explosive

HEI—High Explosive Incendiary

IB—Inhabited Building

IL—Intraline

IM—Intermagazine

MCE—Maximum Credible Event

MCP—Military Construction Program

mm—Millimeter

MSA—Munitions Storage Area

NEW—Net Explosives Weight

NEWQD—Net Explosives Weight for Quantity Distance

OI—Operating Instruction

OPLIM—Operational Limit

PC—Physical Capacity

PES—Potential Explosion Site

POL—Petroleum, Oil and Lubricants

POV—Privately Owned Vehicle

PSI—Pounds Per Square Inch

PTR—Public Traffic Route

Q-D—Quantity-Distance

TO—Technical Order

TP—Target Practice

Terms

Definition of Terms:—The following terms and phrases commonly used in explosives safety operations are described here to provide uniformity. Use standard and service dictionaries for other terms. Also see MIL-STD-444, *Nomenclature and Definitions in the Ammunition Area*.

Aboveground Magazine:—Any building or structure, except an operating building, used for the storage of explosives. Magazines are of two general types: igloo (earth-covered) and aboveground (no earth covering). An aboveground magazine is any structure or facility, without sufficient earth covering, used for the storage of explosives. Also includes open-air munitions stocks, trucks, trailers, railcars or cargo aircraft loaded with explosives.

Aircraft Explosives Cargo Parking Area:—Any area, commonly called a hot cargo pad, specifically designated for parking aircraft loaded with transportation-configured explosives cargo, or those being loaded, unloaded, or awaiting loading.

Aircraft Shelters:—Defined as being one of the following type structures.

Third Generation Aircraft Shelter:—27.4-foot double-radius, pseudo-elliptical arch, 70.8 feet wide by 120 feet long, vertical reinforced concrete panel, laterally opening, sliding, external flush door. Personnel door at one side with barricade.

Korean TAB VEE:—24-foot radius semicircular arch, 48 feet wide by 100.8 feet long, open front. Exhaust port in rear wall protected only by a blast deflector barricade. When hardened doors are installed, consider these shelters as TAB VEE Modified.

Korean Flow –Through:—Constructed from third generation drawing but omits front door, back wall, and personnel door, 70.8 feet wide by 120 feet long, 27.4-foot double-radius, pseudo-elliptical arch.

Ammunition:—Any munitions designed to be thrust from a gun barrel by expanding gases resulting from burning propellant. Rockets would not be included in this definition.

Barricade:—An intervening barrier (natural or artificial) of such type, size, and construction as to limit

the effects of low angle high velocity fragments. Barricades are used to protect assets. They do not stop high angle low speed fragments. Barricades do nothing in preventing overpressures, (blast) from escaping. Test show that at certain distances barricades actually increase overpressure up to 6 times as the shock wave passes over the top of the barricade.

Blast Effect:—The product of the overpressure from the blast wave of an explosion and the time during which it acts at a given point (that is, the area under the positive phase of the overpressure versus time curve.)

Clear Zone:—The area surrounding a potential explosion site that is determined by the required inhabited building separation. The inhabited building separation will be based on the sited, waived, exempted, or actual explosives limits of the potential explosion site, whichever is greatest.

Combat Aircraft Parking Area:—Any area specifically designated for parking a single aircraft loaded with combat-configured explosives, or that being loaded, unloaded, or awaiting loading. This includes aircraft hangars and alert shelters.

Combat Configured Aircraft:—Any aircraft armed with explosives used for direct combat. This could be fighters, bombers, or armed cargo aircraft such as the AC-130.

Compatibility:—Ammunition or explosives are considered compatible if they may be stored or transported together without significantly increasing either the probability of a mishap or, for a given quantity, the magnitude of the effects of such a mishap. Compatibility groups are covered in T.O. 11A-1-46, *Fire Fighting Guidance, Transportation, and Storage*.

Deflagration:—A rapid chemical reaction in which the output of heat is enough to enable the reaction to proceed and accelerate without input of heat from another source. The effect of a true deflagration under confinement is an explosion. Confinement of the reaction increases pressure, rate of reaction, and temperature and may cause transition into a detonation.

Demilitarization:—To mutilate, disarm, or accomplish any other action required preventing the further use of such equipment and materiel for its original intended military or lethal purpose.

Discrepancy:—Noncompliance with requirements in directives.

Detonation:—A violent chemical reaction within a chemical compound or mechanical mixture that creates heat and pressure. A detonation is a reaction or shock wave that proceeds through the reacted material toward the un-reacted material at a supersonic velocity.

Deviation:—Written authorization that allows a specific departure from a mandatory requirement of this regulation other than quantity-distance criteria.

Electro-Explosive Device (EED):—An explosive or pyrotechnic component that initiates an explosive, burning, electrical, or mechanical train and is activated by the application of electrical energy.

Electromagnetic Radiation (EMR):—Radiation made up of oscillating electric and magnetic fields and propagated with the speed of light. Includes gamma radiation, x-rays, ultraviolet, visible and infrared radiation, and radar and radio waves.

Entry Control Point (ECP):—A location or facility used to control pedestrian or vehicular access to controlled or restricted areas. It is commonly found at the entrance to munitions storage areas and combat aircraft parking areas. If it is a permanent facility, it is sometimes also called a Gatehouse.

Environmental Security:—The result of effective explosives safety management, actions, standards,

and criteria that are designed to protect people, equipment, facilities, natural and cultural resources, the public, and environment that because of DoD Operational and Logistics requirements, are associated with, or exposed to, DoD ammunition and explosives-related organizations and activities.

Exemption:—A relatively long-term departure from a mandatory requirement of the quantity-distance standards of this regulation.

Explosive:—A substance or mixture of substances, which under external influences, is capable of rapidly releasing energy in the form of gases and heat.

Explosives:—All ammunition, munitions fillers, demolition material, solid rocket motors, liquid propellants, cartridges, pyrotechnics, mines, bombs, grenades, warheads of all types, explosives elements of ejection and aircrew egress systems, air-launched missiles and those explosive components of missile systems and space systems, and assembled kits and devices containing explosive material. Explosives, explosives weight, net weight, and other like terms also refer to the fillers of an explosive item. Fillers may be explosive mixtures, propellants, pyrotechnics, and other toxic substances. This term does not include liquid fuels and oxidizers that are not used with missiles, rockets, and other such weapons or explosive items.

Explosives-Loaded Aircraft:—An aircraft is "explosives-loaded" when it carries munitions or explosives, internally or externally. The term does not include explosive components of aircrew escape systems or pyrotechnics installed in survival and rescue kits.

Explosive/Missile Safety:—A condition where operational capability, personnel, property, and the environment are protected from unacceptable effects of an ammunition or explosives mishap.

Explosives/Missile Safety Management:—A process of risk management, consisting of policies, procedures, and engineering controls, that reduces the probability and consequences of an ammunition or explosives mishap.

Explosive/Missile Mishap:—An accident or an unexpected event involving DoD ammunition and explosives.

Exposed Explosives:—Explosives that are open to the atmosphere (such as unpackaged bulk explosives, or disassembled or open components) and those are susceptible to initiation directly by static or mechanical spark, or create (or accidentally create) explosive dust, or give off vapors, fumes, or gases in explosives concentrations. This also includes exudation and explosives exposed from damaged munitions such as gunpowder or rocket motors.

Flightline Munitions Holding Area:—A designated area where munitions and components are temporarily positioned awaiting transfer to aircraft. Examples are Ready Service Igloo, Ready Service Magazine, Ready Service Module, Standard Air Munitions Package (STAMP) marshalling area, and Aerial Port of Embarkation (APOE) marshalling area.

Fragmentation:—The breaking up of the ballistic case containing a chemical compound or mechanical mixture when an explosion takes place. Fragments may be complete items, subassemblies, or pieces thereof, as well as pieces from the building, aircraft, revetment, equipment, or other segments of the environment.

Hazard Classification:—Identifies the hazardous characteristics of explosive items by their assignment to established hazard categories governing storage and transportation. These categories are hazard class/division; storage compatibility group; Department of Transportation (DOT) class; and DOT marking.

Hazard Class/Division (HC/D):—Munitions are tested and results formulated to categorize them by reaction to detonation. All AF stock listed items are then listed in AFTO 11A-1-46. There are six classes that the AF normally deals with. They are as follows:

Class 1.1/1.5:—Class 1.1 is expected to produce "mass detonation". Items that fit this class are mostly High Explosive (HE) MK-82's, AGM-65's, MK-84's, etc. Once these items are detonated they sympathetically detonate others until distance between the items is great enough to preclude this action. Class 1.5 (Blasting Agents) munitions have only recently been added to this class, as they are very similar in reaction, however they are much harder to detonate. A good example of this class is the explosives used in the Oklahoma bombing, a mixture of fertilizer, diesel fuel and a detonator.

Class 1.2/1.6:—Class 1.2 is expected to produce "blast with fragmentation." This class is safer than 1.1 in the sense that only a few items are expected to detonate, as the word "mass" does not apply. Some CBU's fall into this category. Class 1.6 has also been assigned to this category. Class 1.6 items are termed "Extremely Insensitive Detonating Substances" or EIDS. In the Weapons world these are "High Tech" or "New Technology" explosive fillers. Very few AF munitions presently are in this class, however, in the near future most munitions will be assigned in this class, even hard bombs and high tech weapons. They are, as the name implies, extremely hard to detonate, but once detonated react as 1.1 HE explosives. This characteristic is very desirable, as storage space becomes more critical.

Class 1.3:—Class 1.3 munitions produces fire with intense heat. Aircraft counter measure flares is a good example of this class.

NOTE: When ANY of the above classes are stored with 1.1 munitions, they must be treated as all being 1.1 items.

Class 1.4:—Class 1.4 munitions present moderate fire. Most small arms ammunition is assigned to this class. This class will not contribute to detonations. These items simply "pop off" when engulfed in fire. Storage of large amounts of this class of explosive presents little risk.

Inhabited Building:—All buildings, locations, or structures, other than explosives locations, used in whole or in part as habitations or places of assembly for personnel, both within and outside military establishments not directly related to explosives operations. For example: schools, churches, residences (quarters), passenger terminals, shopping areas, factories, hospitals, theaters, dining halls, or hangars.

Inhabited Building Distance (IBD):—The minimum allowable distance between an inhabited building and a potential explosion site.

Inspection Station:—A designated location at which vehicles and railcars containing ammunition or explosives are inspected.

Intermagazine Distance:—The minimum distance allowed between two explosives locations. This distance is expected to prevent simultaneous detonation. This distance cannot be waived.

Intraline Distance:—The minimum distance allowed between any two operating locations or other designated exposures. This distance is expected to prevent propagation.

License:—Formal permission to store explosives or munitions outside the sited explosives storage area.

Mass-Detonating Explosives:—High explosives, black powder, certain propellants and pyrotechnics, and other similar explosives. They may be alone or in combination, or loaded into various types of ammunition or containers. Most of the entire quantity can explode instantaneously when a small portion is subjected to fire, to severe concussion or impact, to the impulse of an initiating agent, or to the effect of

a considerable discharge of external energy. Such an explosion will generally cause severe structural damage to adjacent objects. The explosion may cause detonation of other items of ammunition and explosives, stored near enough to (and not adequately protected from) the initially exploding pile, so that the two or more quantities must be considered as one for quantity-distance (Q-D) purposes.

Maximum Credible Event (MCE):—The largest quantity of explosives expected to explode at one time when an item in a stack or group of items is initiated, or when explosives are stored at less than intermagazine distance apart.

Mishap Prevention:—This encompasses all explosives safety criteria and actions necessary to prevent mishaps or to minimize damage, except biomedical functions associated with tolerance and exposure levels for chemical, biological, and radiological (CBR) items.

Net Explosives Weight (NEW):—The total quantity expressed in pounds, of explosives material or pyrotechnics in each item or round. NEW is the term used to identify a munitions explosive "filler" content equivalency to T-N-T. This is to say the explosive filler of different munitions have the same explosive "pressure" as so many lbs. of T-N-T. A MK-82 bomb is rated at 192 lbs. NEW and has the same explosive pressure as 192 lbs. of T-N-T. This is true for hazard class/division (HC/D) 1.1/1.5 and 1.2/1.6 items. For HC/D 1.3 and 1.4 items, NEW is the actual physical weight of the filler as these classes do not "detonate" but simply "burn" with intense heat and moderate fire.

Net Explosives Weight for Quantity Distance (NEWQD):—The total quantity, expressed in pounds, of high explosives equivalency in each item or round to be used when applying quantity-distance (Q-D) criteria or other standards. The NEWQD is equal to the NEW unless hazard classification testing has shown that a lower weight is appropriate for QD purposes. If the NEWQD is less than the NEW, the reason is usually that propellant or other substances do not contribute as much to the blast effect as the same amount of high explosives would.

Propagating Explosion:—The communication of an explosion (detonation or deflagration) from one potential explosion site to another by fire, fragment, or blast (shock wave), where the interval between explosions is long enough to limit the total overpressure at any given time to that which each explosion produces independently. This condition would be evidenced by a distinct shock wave from each detonation. See "simultaneous detonation."

Quantity Distance(QD):—The quantity of explosives material and distance separation relationship which provide defined types of protection. These relationships are based on the level of risk considered acceptable, known as the "K"-factor for each stipulated exposure and are tabulated in QD tables, AFMAN 91-201, Explosive Safety Standards. Separation distances are not absolute safe distances but are relative protective or safe distances.

Radially Aligned:—Two missiles are radially aligned if the fragment pattern from either warhead intersect (90° angle) the other warhead.

Related Facilities:—Any non-explosives facility closely supporting a PES. It does not include utilities.

Revetment:—Barricades constructed to limit or direct a blast to reduce damages from low flying fragments and limit simultaneous detonation. Often used to form modules for open storage of munitions or protected aircraft parking.

Risk Assessment:—A method of determining and documenting hazards, which may be, present and controls for mitigating or eliminating those hazards.

Safety Inspection:—Visits made to assigned, attached, and tenant units by explosives safety personnel to ensure compliance with applicable directives and criteria.

Simultaneous Detonation:—The detonation of two or more items that are near each other, with one item detonating after the next, and with such short intervals between detonations, that the overall detonation appears to have emanated from a single item. Pressures produced by these independent detonations grow together (coalesce) within very short distances from their sources to cause peak overpressures greater than that of each independent source. Preventing simultaneous detonation is equivalent to providing intermagazine distance.

Suspect Vehicle and Railcar Site:—A designated location for placing vehicles or railcars containing explosives that are suspected of being in a hazardous condition. These sites also are used for vehicles that may be in a condition that is hazardous to their contents.

TIER 1:—Peacetime Operations.

TIER 2:—Exercises, Contingencies, or Wartime Operations.

Transportation Mode:—Any in-transit movement of explosives by any mode (rail, highway, air or water) except movement by Munitions Material Handling Equipment.

Waiver:—Written authority for a specific short-term departure from a mandatory quantity-distance (Q-D) requirement of this manual. These should be corrected in less than five years.

Warehouse:—These are facilities for storing material and supplies where personnel are infrequently present. The material may, or may not be associated with ammunition and explosives. Facilities must be sited as warehouses if they are used to store inert munitions components, which are part of the accountable munitions stockpile.

Weapons Safety Personnel:—Individuals technically qualified through specialized training and experience in all phases of explosives operations and activities.

Attachment 2

**PARKING AREAS FOR EXPLOSIVE-LOADED COMBAT
AND CARGO AIRCRAFT**

ALPHA DIAMOND

SITE	DESCRIPTION	HC/D	NEW	SAFETY/COMPENSATORY ACTIONS & SITE PLAN INFO
A-2 1859/1860	Korean TAB VEE - Modified (HAS)	1.1 (04)1.2 1.3 1.4	2,500 2,500 2,500 2,500	Explosive Safety Requirements: Note 7 Compensatory Actions: None Site Plan: PACAF-OSAN-86-E2
A-3 1861/1862	Korean TAB VEE - Modified (HAS)	1.1 (04)1.2 1.3 1.4	2,500 2,500 2,500 2,500	Explosive Safety Requirements: Note 7 Compensatory Actions: Note 1 Site Plan: PACAF-OSAN-86-E7
A-4 1863/1864	Korean TAB VEE - Modified (HAS)	1.1 (04)1.2 1.3 1.4	2,500 2,500 2,500 2,500	Explosive Safety Requirements: Note 7 Compensatory Actions: None Site Plan: PACAF-OSAN-86-E8
A-5 1865/1866	1865 - Korean TAB VEE – Modified (HAS) 1866 - Korean TAB VEE – (HAS) No doors; not modified	1.1 (04)1.2 1.3 1.4	2,500 2,500 2,500 2,500	Explosive Safety Requirements: Note 7 Compensatory Actions: Note 2 Site Plan: PACAF-OSAN-86-E9
A-6 1867/1868	1867 - Korean TAB VEE – (HAS) No doors; not modified 1868 - Korean TAB VEE – Modified (HAS)	1.1 (04)1.2 1.3 1.4	2,500 2,500 2,500 2,500	Explosive Safety Requirements: Note 7 Compensatory Actions: None Site Plan: PACAF-OSAN-86-E10
A-7 1869/1870	Korean TAB VEE - Modified (HAS)	1.1 (04)1.2 1.3 1.4	2,500 2,500 2,500 2,500	Explosive Safety Requirements: Note 7 Compensatory Actions: None Site Plan: PACAF-OSAN-86-E11
A-8 1871/1872	Korean TAB VEE - Modified (HAS)	1.1 (04)1.2 1.3 1.4	2,500 2,500 2,500 2,500	Explosive Safety Requirements: Note 7 Compensatory Actions: None Site Plan: PACAF-OSAN-86-E12

A-9	Combat Aircraft Parking Area (Hardstand) – ARMCO Revetment Barricaded on three sides	1.1	5,000	Explosive Safety Requirements: Note 7 Compensatory Actions: None Site Plan: PACAF-OSAN-86-E13
		(04)1.2	5,000	
		1.3	5,000	
		1.4	5,000	
A-10	Combat Aircraft Parking Area (Hardstand) – ARMCO Revetment Barricaded on three sides	1.1	3,000	Explosive Safety Requirements: Note 7 Compensatory Actions: Note 3 Site Plan: PACAF-OSAN-86-E14
		(04)1.2	3,000	
		1.3	3,000	
		1.4	3,000	
A-11	Combat Aircraft Parking Area (Hardstand) – ARMCO Revetment Barricaded on three sides	1.1	5000	Explosive Safety Requirements: Note 7 Compensatory Actions: Note 3 Site Plan: PACAF-OSAN-86-E15
		(04)1.2	5000	
		1.3	5000	
		1.4	5000	
A-12	Combat Aircraft Parking Area (Hardstand) – ARMCO Revetment Barricaded on three sides	1.1	2,370	Explosive Safety Requirements: Note 7 Compensatory Actions: None Site Plan: PACAF-OSAN-86-E16
		(04)1.2	2,370*	
		1.3	2,370*	
		1.4	2,370*	
A-13	Combat Aircraft Parking Area (Hardstand) – ARMCO Revetment Barricaded on three sides	1.1	600	Explosive Safety Requirements: Note 7 Compensatory Actions: Note 5 Site Plan: PACAF-OSAN-86-E17
		(04)1.2	600	
		1.3	600	
		1.4	600	
A-14 1850	Korean TAB VEE - Modified (HAS) Maintenance Facility	1.1	110	Explosive Safety Requirements: Note 7 Compensatory Actions: None Site Plan: PACAF-OSAN-86-S42
		(04)1.2	110	
		1.3	110	
		1.4	110	
A-15	Combat Aircraft Parking Area (Hardstand) – ARMCO Revetment Barricaded on three sides	1.1	5,000	Explosive Safety Requirements: Note 7 Compensatory Actions: None Site Plan: PACAF-OSAN-86-E18
		(04)1.2	5,000	
		1.3	5,000	
		1.4	5,000	
A-16 1851/1852	Korean TAB VEE - Modified (HAS)	1.1	2,500	Explosive Safety Requirements: Note 7 Compensatory Actions: *Note 4 Site Plan: PACAF-OSAN-86-E2
		(04)1.2	2,500	
		1.3	2,500	
		1.4	2,500	
A-17 1853/1854	Korean TAB VEE - Modified (HAS)	1.1	2,500	Explosive Safety Requirements: Note 7 Compensatory Actions: None Site Plan: PACAF-OSAN-86-E3
		(04)1.2	2,500	
		1.3	2,500	
		1.4	2,500	

A-18 1855/1856	Korean TAB VEE - Modified (HAS)	1.1	2,500	Explosive Safety Requirements: Note 7 Compensatory Actions: Note 4 Site Plan: PACAF-OSAN-86-E4
		(04)1.2	2,500	
		1.3	2,500	
		1.4	2,500	
A-19 1857/1858	Korean TAB VEE - Modified (HAS)	1.1	2,500	Explosive Safety Requirements: Note 7 Compensatory Actions: None Site Plan: PACAF-OSAN-86-E5
		(04)1.2	2,500	
		1.3	2,500	
		1.4	2,500	
A-20L 20R	Flightline Munitions Holding Area Ready Service Magazine (RSM)	(14)1.1	2,500	Explosive Safety Requirements: Note 7 Compensatory Actions: Note 6 Site Plan: PACAF-OSAN-96-S6
		(08)1.2	2,500	
		1.3	2,000	
		1.4	PC	

NOTES:

1. Flow-thru parking spot #1 adjacent to 1862 will not be used for operational aircraft parking (except battle damaged A/C) when explosives in excess of 110 lbs. NEW are located in HAS 1861/1862. Reference ESP PACAF-OSAN-86-E7.

2. Flow-thru parking spot #4 adjacent to 1865 will not be used for operational aircraft parking (except battle damaged A/C) when explosives in excess of 110 lbs. NEW are located in HAS 1865/1866. Reference ESP PACAF-OSAN-86-E9.

3. Munitions in revetments A-10 and A-11 will be positioned to provide 190 feet separation or behind revetment walls to prevent line-of-site violations. Reference ESP PACAF-OSAN 86-E14 & E15.

4. Engine test facility will not be used anytime 1.1 munitions in excess of 110 lbs. are located in HAS *1851, 1852, 1855 and 1856. Reference ESP PACAF-OSAN-86-E2 & E4.

5. When building 1830 goes into tier 2 operations for exercises, revetment A-13 will only be used to store inert, non-mission essential equipment and supplies. Ref: ESP PACAF-OSAN-96-S13.

6. Revetments A-20L and A-20R are authorized to store 2,500 lbs. of 1.1, (08)1.2, (04)1.2, 1.3, and 1.4 explosives during exercises, contingencies and wartime only. No explosives NEW during peace time allowed. Each revetment shall be marked with a box 10 feet from each side-wall and 20 feet from the rear. This is the only area in the revetments authorized munitions. In other words, only the aft 20 feet of each cell 10 feet from the side-wall is authorized explosive storage. Each cell can and will be used to park aircraft if the need arises, but explosives loading operations will be prohibited on these aircraft and HAS 1855, 1856, 1857, and 1858 can not contain more than 110 lbs. NEW. Reference ESP PACAF-OSAN-96-S6, PACAF-OSAN-86-E4 & E5.

7. *Explosive Safety Requirement Considerations:

All Korean TAB VEE HAS's with abutting walls will maintain 27-foot standoff distance between munitions. Munitions will not be adjacent to the abutting wall in both HAS's at the same time.

For hard-stands A-9 thru A-13 and A-15, explosives will be positioned inward three feet from the end of the wing walls, at least 10 feet from revetment walls, and two feet below the top of the walls. Muni-

tions should be dispersed as widely as possible within the cell. See AFMAN 91-201, paragraph 3.12.5.2.

GOV and powered age equipment parking will be at least 100 feet from explosives. Temporary parking of GOV and AGE, other than those being loaded or unloaded, will not be parked closer than 25 feet to any explosives. Temporary means the length of time for which the presence of the vehicle/AGE is essential to completion of a single task. This restriction does not apply to approved operations inside HASs or on hardstands.

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, ICT's, and short periods to move equipment and munitions. Reference AFMAN 91-201, T3.3, Note 12.

The following actions constitutes servicing:

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

During weapons loading and unloading

HAS doors may be opened 10 feet in conjunction with liquid oxygen or nitrogen servicing. 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.

When operating aerospace ground equipment on aircraft in HAS

When conducting aircraft maintenance engine runs

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

BRAVO DIAMOND

SITE	DESCRIPTION	HC/D	NEW	SAFETY/COMPENSATORY ACTIONS & SITE PLAN INFO
B-2 1651/1652	Korean TAB VEE - Modified (HAS)	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	2,000 2,000 2,000 OPLIM OPLIM	Explosive Safety Requirements: Note 3 Compensatory Actions: Note 1 Site Plan: PACAF-OSAN-96-S05
B-3 1653/1654	Korean TAB VEE - Modified (HAS)	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	2,000 2,000 2,000 OPLIM OPLIM	Explosive Safety Requirements: Note 3 Compensatory Actions: Note 1 Site Plan: PACAF-OSAN-96-S05

B-4 1655/1656	Korean TAB VEE - Modified (HAS)	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	2,000 2,000 2,000 OPLIM OPLIM	Explosive Safety Requirements: Note 3 Compensatory Actions: Note 1 Site Plan: PACAF-OSAN-96-S05
B-5 1657	Korean TAB VEE - Modified (HAS)	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	1,585 2,000 2,000 OPLIM OPLIM	Explosive Safety Requirements: Note 3 Compensatory Actions: Note 1 Site Plan: PACAF-OSAN-96-S05 PACAF-OSAN-97-S01
B-5 1658	Korean TAB VEE – (HAS) No door; not modified	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	1,298 2,000 2,000 OPLIM OPLIM	Explosive Safety Requirements: Note 3 Compensatory Actions: Note 1 Site Plan: PACAF-OSAN-96-S05 PACAF-OSAN-97-S01
B-6 1659	Korean TAB VEE – (HAS) No door; not modified	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	1,298 2,000 2,000 OPLIM OPLIM	Explosive Safety Requirements: Note 3 Compensatory Actions: Note 1 Site Plan: PACAF-OSAN-96-S05 PACAF-OSAN-97-S01
B-6 1660	Korean TAB VEE – Modified (HAS)	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	2,000 2,000 2,000 OPLIM OPLIM	Explosive Safety Requirements: Note 3 Compensatory Actions: Note 1 Site Plan: PACAF-OSAN-96-S05
B-7 1661/1662	Korean TAB VEE – Modified (HAS)	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	2,000 2,000 2,000 OPLIM OPLIM	Explosive Safety Requirements: Note 3 Compensatory Actions: Note 1 Site Plan: PACAF-OSAN-96-S05
B-8 1663/1664	Korean TAB VEE – Modified (HAS)	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	2,000 2,000 2,000 OPLIM OPLIM	Explosive Safety Requirements: Note 3 Compensatory Actions: Note 1 Site Plan: PACAF-OSAN-96-S05

B-9 1665/1666	Korean TAB VEE – Modified (HAS)	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	2,000 2,000 2,000 OPLIM OPLIM	Explosive Safety Requirements: Note 3 Compensatory Actions: Note 1 Site Plan: PACAF-OSAN-96-S05
B-10 1667/1668	1667 - Korean TAB VEE – Modified (HAS) 1668 - Korean TAB VEE – (HAS) No doors; not modified	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	2,000 2,000 2,000 OPLIM OPLIM	Explosive Safety Requirements: Note 3 Compensatory Actions: Note 1 Site Plan: PACAF-OSAN-96-S05
B-11 1669/1670	1669 - Korean TAB VEE – (HAS) No doors; not modified 1670 - Korean TAB VEE – Modified (HAS)	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	2,000 2,000 2,000 OPLIM OPLIM	Explosive Safety Requirements: Note 3 Compensatory Actions: Note 1 Site Plan: PACAF-OSAN-96-S05
B-12 1671/1672	Korean TAB VEE – Modified (HAS)	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	2,000 2,000 2,000 OPLIM OPLIM	Explosive Safety Requirements: Note 3 Compensatory Actions: Note 1 Site Plan: PACAF-OSAN-96-S05
B-13 1673/1674	1673 - Korean TAB VEE – (HAS) No doors; not modified 1674 - Korean TAB VEE – Modified (HAS)	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	2,000 2,000 2,000 OPLIM OPLIM	Explosive Safety Requirements: Note 3 Compensatory Actions: Note 1 Site Plan: PACAF-OSAN-96-S05
B-14 1675/1676	Korean TAB VEE – Modified (HAS)	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	2,000 2,000 2,000 OPLIM OPLIM	Explosive Safety Requirements: Note 3 Compensatory Actions: Note 1 Site Plan: PACAF-OSAN-96-S05
B-15 1677/1678	Korean TAB VEE – Modified (HAS)	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	2,000 2,000 2,000 OPLIM OPLIM	Explosive Safety Requirements: Note 3 Compensatory Actions: Note 1 & 2 Site Plan: PACAF-OSAN-96-S05 PACAF-OSAN-84-S4

B-16 1679/1680	Korean TAB VEE - Modified (HAS)	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	2,000 2,000 2,000 OPLIM OPLIM	Explosive Safety Requirements: Note 3 Compensatory Actions: Note 1 & 2 Site Plan: PACAF-OSAN-96-S05 PACAF-OSAN-84-S4
B-17 1681/1682	Korean TAB VEE - Modified (HAS)	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	1,298 2,000 2,000 OPLIM OPLIM	Explosive Safety Requirements: Note 3 Compensatory Actions: Note 1 Site Plan: PACAF-OSAN-96-S05
B-18 1683/1684	Korean TAB VEE - Modified (HAS)	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	2,000 2,000 2,000 OPLIM OPLIM	Explosive Safety Requirements: Note 3 Compensatory Actions: Note 1 Site Plan: PACAF-OSAN-96-S05
B-19 1685/1686	Korean TAB VEE - Modified (HAS)	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	2,000 2,000 2,000 OPLIM OPLIM	Explosive Safety Requirements: Note 3 Compensatory Actions: Note 1 Site Plan: PACAF-OSAN-96-S05
SPOT 12	Combat Aircraft Parking Area (CAPA) – ARMCO Revetment barricaded on two sides	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	1,298 2,000 2,000 OPLIM OPLIM	Explosive Safety Requirements: Note 3 Compensatory Actions: Note 1 Site Plan: PACAF-OSAN-96-S05
SPOT 13	Combat Aircraft Parking Area (CAPA) – ARMCO Revetment barricaded on two sides	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	1,298 2,000 2,000 OPLIM OPLIM	Explosive Safety Requirements: Note 3 Compensatory Actions: Note 1 Site Plan: PACAF-OSAN-96-S05

NOTES:

1. No peacetime munitions authorized in Bravo Diamond HAS's. The NEW limits shown are those authorized for exercises, contingencies, and wartime only. Bravo Diamond HAS's can be used to park aircraft if the need arises, but storage of explosives and explosives loading/unloading operations will be prohibited on these aircraft during peacetime.

2. HAS's 1678/1679 Korean TAB VEE are used for Avionics storage. These facilities are not sited for explosives. Can be reconverted for non-explosive loaded aircraft use. In this event the fuel tank in 1679 will be purged and the heating system electrically isolated to prevent a hazard to aircraft fuel vapors. The driveway is permanently a load/unload zone. Reference ESP PACAF-OSAN-84-S4.

3. Explosive Safety Requirement Considerations

All Korean TAB VEE HAS's with abutting walls will maintain 27-foot standoff distance between munitions. Munitions will not be adjacent to the abutting wall in both HAS's at the same time.

GOV and powered age equipment parking will be at least 100 feet from explosives. Temporary parking of GOV and AGE, other than those being loaded or unloaded, will not be parked closer than 25 feet to any explosives. Temporary means the length of time for which the presence of the vehicle/AGE is essential to completion of a single task. This restriction does not apply to approved operations inside HAS's.

* 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, ICT's, and short periods to move equipment and munitions in or out. Reference AFMAN 91-201, T3.3, Note 12.

The following actions constitutes servicing:

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

During weapons loading and unloading

HAS doors may be opened 10 feet in conjunction with liquid oxygen or nitrogen servicing. Each leg of Bravo 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.

When operating aerospace ground equipment on aircraft in HAS

When conducting aircraft maintenance engine runs

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

THIRD GENERATION SHELTERS WITHOUT CAPA

SITE	DESCRIPTION	HC/D	NEW	SAFETY/COMPENSATORY ACTIONS & SITE PLAN INFO
1753 Gen #1	3rd Generation HAS	1.1	2,500	Explosive Safety Requirements: Note 1
		(04)1.2	2,500	Compensatory Actions: *Note 2
		1.3	2,500,2,	
		1.4	500	Site Plan: PACAF-OSAN-85-SXX
1754 Gen #2	3rd Generation HAS	1.1	2,500	Explosive Safety Requirements: Note 1
		(04)1.2	2,500	Compensatory Actions: *Note 2
		1.3	2,500	
		1.4	2,500	Site Plan: PACAF-OSAN-85-SXX

1755 Gen #3	3rd Generation HAS	1.1 (04)1.2 1.3 1.4	2,500 2,500 2,500 2,500	Explosive Safety Requirements: Note 1 Compensatory Actions: *Note 2 Site Plan: PACAF-OSAN-85-SXX
1756 Gen #4	3rd Generation HAS	1.1 (04)1.2 1.3 1.4	2,500 2,500 2,500 2,500	Explosive Safety Requirements: Note 1 Compensatory Actions: *Note 2 Site Plan: PACAF-OSAN-85-SXX
1757 Gen #5	3rd Generation HAS	1.1 (04)1.2 1.3 1.4	2,500 2,500 2,500 2,500	Explosive Safety Requirements: Note 1 Compensatory Actions: *Note 2 Site Plan: PACAF-OSAN-85-SXX
1758 Gen #6	3rd Generation HAS	1.1 (04)1.2 1.3 1.4	2,500 2,500 2,500 2,500	Explosive Safety Requirements: Note 1 Compensatory Actions: *Note 2 Site Plan: PACAF-OSAN-85-SXX
1759 Gen #7	3rd Generation HAS	1.1 (04)1.2 1.3 1.4	2,500 2,500 2,500 2,500	Explosive Safety Requirements: Note 1 Compensatory Actions: *Note 2 Site Plan: PACAF-OSAN-85-SXX
1760 Gen # 8	3rd Generation HAS	1.1 (04)1.2 1.3 1.4	2,500 2,500 2,500 2,500	Explosive Safety Requirements: Note 1 Compensatory Actions: *Note 2 Site Plan: PACAF-OSAN-85-SXX
1761 Gen #9	3rd Generation HAS	1.1 (04)1.2 1.3 1.4	2,500 2,500 2,500 2,500	Explosive Safety Requirements: Note 1 Compensatory Actions: *Note 2 Site Plan: PACAF-OSAN-85-SXX
1762 Gen #10	3rd Generation HAS	1.1 (04)1.2 1.3 1.4	2,500 2,500 2,500 2,500	Explosive Safety Requirements: Note 1 Compensatory Actions: *Note 2 Site Plan: PACAF-OSAN-85-SXX
1763 Gen #11	3rd Generation HAS	1.1 (04)1.2 1.3 1.4	2,500 2,500 2,500 2,500	Explosive Safety Requirements: Note 1 Compensatory Actions: *Note 2 Site Plan: PACAF-OSAN-85-SXX

1764 Gen #12	3rd Generation HAS	1.1	2,500	Explosive Safety Requirements: Note 1 Compensatory Actions: *Note 2 Site Plan: PACAF-OSAN-85-SXX
		(04)1.2	2,500	
		1.3	2,500	
		1.4	2,500	
1778 Gen #13	3rd Generation HAS	1.1	2,500	Explosive Safety Requirements: Note 1 Compensatory Actions: *Note 2 Site Plan: PACAF-OSAN-85-SXX
		(04)1.2	2,500	
		1.3	2,500	
		1.4	2,500	
1779 Gen #14	3rd Generation HAS	1.1	2,500	Explosive Safety Requirements: Note 1 Compensatory Actions: *Note 2 Site Plan: PACAF-OSAN-85-SXX
		(04)1.2	2,500	
		1.3	2,500	
		1.4	2,500	
1780 Gen #15	3rd Generation HAS	1.1	2,500	Explosive Safety Requirements: Note 1 Compensatory Actions: *Note 2 Site Plan: PACAF-OSAN-85-SXX
		(04)1.2	2,500	
		1.3	2,500	
		1.4	2,500	
1781 Gen #16	3rd Generation HAS	1.1	2,500	Explosive Safety Requirements: Note 1 Compensatory Actions: *Note 2 Site Plan: PACAF-OSAN-85-SXX
		(04)1.2	2,500	
		1.3	2,500	
		1.4	2,500	

NOTES:1: Explosive Safety Requirement Considerations:

GOV and powered age equipment parking will be at least 100 feet from explosives. Temporary parking of GOV and AGE, other than those being loaded or unloaded, will not be parked closer than 25 feet to any explosives. Temporary means the length of time for which the presence of the vehicle/AGE is essential to completion of a single task. This restriction does not apply to approved operations inside HAS's.

* 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, ICT's, and short periods to move equipment and munitions in or out. Reference AFMAN 91-201, T3.3, Note 12.

The following actions constitutes servicing:

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

During weapons loading and unloading

HAS doors may be opened 10 feet in conjunction with liquid oxygen or nitrogen servicing. One side of the Pigpen may be serviced with doors open 10 feet for scheduled flyers. All doors must be closed prior to starting servicing on the other side.

When operating aerospace ground equipment on aircraft in HAS

When conducting aircraft maintenance engine runs

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

2: * The listed NEW's are only valid when the entire Combat Aircraft Parking Area (CAPA) is cleared of all parked aircraft. (i.e., during exercises, contingencies, and war time)

THIRD GENERATION SHELTERS WITH CAPA

SITE	DESCRIPTION	HC/D	NEW	SAFETY/COMPENSATORY ACTIONS & SITE PLAN INFO
1753 Gen #1	3rd Generation HAS	1.1	1,330	Explosive Safety Requirements: Note 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - 20
		(04)1.2	1,330	
		1.3	1,330	
		1.4	1,330	
1754 Gen #2	3rd Generation HAS	1.1	2,795	Explosive Safety Requirements: Note 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - 20
		(04)1.2	2,795	
		1.3	2,795	
		1.4	2,795	
1755 Gen #3	3rd Generation HAS	1.1	1,295	Explosive Safety Requirements: Note 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - 20
		(04)1.2	1,295	
		1.3	1,295	
		1.4	1,295	
1756 Gen #4	3rd Generation HAS	1.1	2,690	Explosive Safety Requirements: Note 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - 20
		(04)1.2	2,690	
		1.3	2,690	
		1.4	2,690	
1757 Gen #5	3rd Generation HAS	1.1	3,300	Explosive Safety Requirements: Note 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - 20
		(04)1.2	3,300	
		1.3	3,300	
		1.4	3,300	
1758 Gen #6	3rd Generation HAS	1.1	2,440	Explosive Safety Requirements: Note 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - 20
		(04)1.2	2,440	
		1.3	2,440	
		1.4	2,440	
1759 Gen #7	3rd Generation HAS	1.1	3,300	Explosive Safety Requirements: Note 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - 20
		(04)1.2	3,300	
		1.3	3,300	
		1.4	3,300	

1760 Gen # 8	3rd Generation HAS	1.1 (04)1.2 1.3 1.4	2,535 2,535 2,535 2,535	Explosive Safety Requirements: Note 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - 20
1761 Gen #9	3rd Generation HAS	1.1 (04)1.2 1.3 1.4	1,110 1,110 1,110 1,110	Explosive Safety Requirements: Note 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - 20
1762 Gen #10	3rd Generation HAS	1.1 (04)1.2 1.3 1.4	2,435 2,435 2,435 2,435	Explosive Safety Requirements: Note 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - 20
1763 Gen #11	3rd Generation HAS	1.1 (04)1.2 1.3 1.4	1,110 1,110 1,110 1,110	Explosive Safety Requirements: Note 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - 20
1764 Gen #12	3rd Generation HAS	1.1 (04)1.2 1.3 1.4	2,385 2,385 2,385 2,385	Explosive Safety Requirements: Note 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - 20
1778 Gen #13	3rd Generation HAS	1.1 (04)1.2 1.3 1.4	NONE NONE NONE NONE	Explosive Safety Requirements: Note 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - 20
1779 Gen #14	3rd Generation HAS	1.1 (04)1.2 1.3 1.4	1,500 1,500 1,500 1,500	Explosive Safety Requirements: Note 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - 20
1780 Gen #15	3rd Generation HAS	1.1 (04)1.2 1.3 1.4	1,460 1,460 1,460 1,460	Explosive Safety Requirements: Note 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - 20
1781 Gen #16	3rd Generation HAS	1.1 (04)1.2 1.3 1.4	3,020 3,020 3,020 3,020	Explosive Safety Requirements: Note 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - 20

NOTES:

1: Explosive Safety Requirement Considerations:

GOV and powered age equipment parking will be at least 100 feet from explosives. Temporary parking of GOV and AGE, other than those being loaded or unloaded, will not be parked closer than 25 feet to any explosives. Temporary means the length of time for which the presence of the vehicle/AGE is essential to completion of a single task. This restriction does not apply to approved operations inside HAS's.

* 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, ICT's, and short periods to move equipment and munitions in or out. Reference AFMAN 91-201, T3.3, Note 12.

The following actions constitutes servicing:

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

During weapons loading and unloading

HAS doors may be opened 10 feet in conjunction with liquid oxygen or nitrogen servicing. One side of the Pigpen may be serviced with doors open 10 feet for scheduled flyers. All doors must be closed prior to starting servicing on the other side.

When operating aerospace ground equipment on aircraft in HAS

When conducting aircraft maintenance engine runs

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

2: * The listed NEW's are for day-to-day operations. For exercises, contingencies and wartime or if the CAPA is cleared of all aircraft the NEW's listed under Third Generation Shelters Without CAPA will apply.

COMBAT AIRCRAFT PARKING AREA (CAPA)

SITE	DESCRIPTION	HC/D	NEW	SAFETY/COMPENSATORY ACTIONS & SITE PLAN INFO
SPOT 1	COMBAT AIRCRAFT PARKING SPOT	1.1	None	Explosive Safety Requirements: Note 1
		1.2.1≤70	None	Compensatory Actions: None
		1.2.2	5,000	
		1.2.3	5,000	
		1.3	5,000	Site Plan: PACAF-OSAN S01 - S20
		1.4	5,000	

SPOT 2	COMBAT AIRCRAFT PARKING SPOT	1.1 1.2.1 \leq 70 1.2.2 1.2.3 1.3 1.4	None 250 5,000 5,000 5,000 5,000	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - S20
<u>SPOT 3</u>	COMBAT AIRCRAFT PARKING SPOT	1.1 1.2.1 \leq 70 1.2.2 1.2.3 1.3 1.4	None 250 5,000 5,000 5,000 5,000	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - S20
<u>SPOT 4</u>	COMBAT AIRCRAFT PARKING SPOT	1.1 1.2.1 \leq 70 1.2.2 1.2.3 1.3 1.4	None 250 5,000 5,000 5,000 5,000	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - S20
SPOT 5	COMBAT AIRCRAFT PARKING SPOT	1.1 1.2.1 \leq 70 1.2.2 1.2.3 1.3 1.4	None 250 5,000 5,000 5,000 5,000	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - S20
SPOT 6	COMBAT AIRCRAFT PARKING SPOT	1.1 1.2.1 \leq 70 1.2.2 1.2.3 1.3 1.4	None 250 5,000 5,000 5,000 5,000	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - S20
SPOT 7	COMBAT AIRCRAFT PARKING SPOT	1.1 1.2.1 \leq 70 1.2.2 1.2.3 1.3 1.4	None 250 5,000 5,000 5,000 5,000	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - S20

SPOT 8	COMBAT AIRCRAFT PARKING SPOT	1.1	None	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - S20
		1.2.1 \leq 70	250	
		1.2.2	5,000	
		1.2.3	5,000	
		1.3	5,000	
		1.4	5,000	
SPOT 9	COMBAT AIRCRAFT PARKING SPOT	1.1	None	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - S20
		1.2.1 \leq 70	250	
		1.2.2	5,000	
		1.2.3	5,000	
		1.3	5,000	
		1.4	5,000	
SPOT 10	COMBAT AIRCRAFT PARKING SPOT	1.1	None	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - S20
		1.2.1 \leq 70	250	
		1.2.2	5,000	
		1.2.3	5,000	
		1.3	5,000	
		1.4	5,000	
SPOT 11	COMBAT AIRCRAFT PARKING SPOT	1.1	None	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - S20
		1.2.1 \leq 70	250	
		1.2.2	5,000	
		1.2.3	5,000	
		1.3	5,000	
		1.4	5,000	
SPOT 12	COMBAT AIRCRAFT PARKING SPOT	1.1	None	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - S20
		1.2.1	None	
		1.2.2	5,000	
		1.2.3	5,000	
		1.3	5,000	
		1.4	5,000	
SPOT 13	COMBAT AIRCRAFT PARKING SPOT	1.1	None	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - S20
		1.2.1	None	
		1.2.2	5,000	
		1.2.3	5,000	
		1.3	5,000	
		1.4	5,000	

SPOT 14	COMBAT AIRCRAFT PARKING SPOT	1.1	None	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - S20
		1.2.1	None	
		1.2.2	5,000	
		1.2.3	5,000	
		1.3	5,000	
		1.4	5,000	
SPOT 15	COMBAT AIRCRAFT PARKING SPOT	1.1	None	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - S20
		1.2.1 ≤ 66	250	
		1.2.2	5,000	
		1.2.3	5,000	
		1.3	5,000	
		1.4	5,000	
SPOT 16	COMBAT AIRCRAFT PARKING SPOT	1.1	None	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - S20
		1.2.1 ≤ 70	250	
		1.2.2	5,000	
		1.2.3	5,000	
		1.3	5,000	
		1.4	5,000	
SPOT 17	COMBAT AIRCRAFT PARKING SPOT	1.1	None	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - S20
		1.2.1 ≤ 70	250	
		1.2.2	5,000	
		1.2.3	5,000	
		1.3	5,000	
		1.4	5,000	
SPOT 18	COMBAT AIRCRAFT PARKING SPOT	1.1	None	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - S20
		1.2.1 ≤ 70	250	
		1.2.2	5,000	
		1.2.3	5,000	
		1.3	5,000	
		1.4	5,000	
SPOT 19	COMBAT AIRCRAFT PARKING SPOT	1.1	None	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN S01 - S20
		1.2.1 ≤ 70	250	
		1.2.2	5,000	
		1.2.3	5,000	
		1.3	5,000	
		1.4	5,000	

SPOT 20	COMBAT AIRCRAFT PARKING SPOT	1.1	None	Explosive Safety Requirements: Note 1
		1.2.1 ≤ 70	250	
		1.2.2	5,000	Site Plan: PACAF-OSAN S01 - S20
		1.2.3	5,000	
		1.3	5,000	
		1.4	5,000	

NOTES:

1: Explosive Safety Requirement Considerations:

GOV and powered age equipment parking will be at least 100 feet from explosives loaded aircraft. Temporary parking of GOV and AGE, other than those being loaded or unloaded, will not be parked closer than 25 feet to any explosives. Temporary means the length of time for which the presence of the vehicle/AGE is essential to completion of a single task.

* 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, ICT's, and short periods to move equipment and munitions in or out. Reference AFMAN 91-201, T3.3, Note 12.

KOREAN FLOW-THRU SHELTERS

SITE	DESCRIPTION	HC/D	NEW	SAFETY/COMPENSATORY ACTIONS & SITE PLAN INFO
1688 Flow #15	Korean Flow-Through Shelter	1.1	2,344	Explosive Safety Requirements: Note 1
		1.2	2,344	Compensatory Actions: Note 2
		1.3	2,344	Site Plan: PACAF-OSAN-78-E-01 and SECAF Approval Letter dated 18 Jan 82
		1.4	2,344	
1689 Flow #16	Korean Flow-Through Shelter	1.1	2,344	Explosive Safety Requirements: Note 1
		1.2	2,344	Compensatory Actions: Note 2
		1.3	2,344	Site Plan: PACAF-OSAN-78-E-02 and SECAF Approval Letter dated 18 Jan 82
		1.4	2,344	
1690 Flow #17	Korean Flow-Through Shelter	1.1	2,344	Explosive Safety Requirements: Note 1
		1.2	2,344	Compensatory Actions: Note 2
		1.3	2,344	Site Plan: PACAF-OSAN-78-E-03 and SECAF Approval Letter dated 18 Jan 82
		1.4	2,344	
1691 Flow #18	Korean Flow-Through Shelter	1.1	2,344	Explosive Safety Requirements: Note 1
		1.2	2,344	Compensatory Actions: Note 2
		1.3	2,344	Site Plan: PACAF-OSAN-78-E-04 and SECAF Approval Letter dated 18 Jan 82
		1.4	2,344	

1692 Flow #19	Korean Flow-Through Shelter	1.1	2,344	Explosive Safety Requirements: Note 1
		1.2	2,344	Compensatory Actions: Note 2
		1.3	2,344	Site Plan: PACAF-OSAN-78-E-05 and
		1.4	2,344	SECAF Approval Letter dated 18 Jan 82
1693 Flow #20	Korean Flow-Through Shelter	1.1	2,344	Explosive Safety Requirements: Note 1
		1.2	2,344	Compensatory Actions: Note 2
		1.3	2,344	Site Plan: PACAF-OSAN-78-E-06 and
		1.4	2,344	SECAF Approval Letter dated 18 Jan 82
1894 Flow #21	Korean Flow-Through Shelter	1.1	2,344	Explosive Safety Requirements: Note 1
		1.2	2,344	Compensatory Actions: Note 2
		1.3	2,344	Site Plan: PACAF-OSAN-78-E-07 and
		1.4	2,344	SECAF Approval Letter dated 18 Jan 82
1895 Flow #22	Korean Flow-Through Shelter	1.1	2,344	Explosive Safety Requirements: Note 1
		1.2	2,344	Compensatory Actions: Note 2
		1.3	2,344	Site Plan: PACAF-OSAN-78-E-08 and
		1.4	2,344	SECAF Approval Letter dated 18 Jan 82
1896 Flow #23	Korean Flow-Through Shelter	1.1	2,344	Explosive Safety Requirements: Note 1
		1.2	2,344	Compensatory Actions: Note 2
		1.3	2,344	Site Plan: PACAF-OSAN-78-E-09 and
		1.4	2,344	SECAF Approval Letter dated 18 Jan 82
1897 Flow #24	Korean Flow-Through Shelter	1.1	2,344	Explosive Safety Requirements: Note 1
		1.2	2,344	Compensatory Actions: Note 2
		1.3	2,344	Site Plan: PACAF-OSAN-78-E-10 and
		1.4	2,344	SECAF Approval Letter dated 18 Jan 82

NOTES:**1:** Explosive Safety Requirement Considerations:

All Korean TAB VEE HAS's with abutting walls will maintain 27-foot standoff distance between munitions. Munitions will not be adjacent to the abutting wall in both HAS's at the same time.

GOV and powered age equipment parking will be at least 100 feet from explosives. Temporary parking of GOV and AGE, other than those being loaded or unloaded, will not be parked closer than 25 feet to any explosives. Temporary means the length of time for which the presence of the vehicle/AGE is essential to completion of a single task. This restriction does not apply to approved operations inside HAS's.

2: During live bomb loading the following precautions will be taken:

Personnel not required in support of quick turn operations will be evacuated to K-18 distance (240 Feet for maximum 2,344 lbs. NEW) from explosives sources.

Only essential mission support personnel will remain in facilities located between K-18 and K-24 distances.

All non-military personnel will be restricted from being within the minimum fragment distance (532 Feet for maximum 2,344 lbs. NEW).

Aircraft passenger transport functions will not be conducted within minimum fragment distance during live bomb operations (532 Feet for maximum 2,344 lbs. NEW).

HOT CARGO PAD/CARGO APRONS A, B, AND C

SITE	DESCRIPTION	HC/D	NEW	SAFETY/COMPENSATORY ACTIONS & SITE PLAN INFO
HCP	Aircraft Explosive Cargo Parking Area (Hot Cargo Pad)	1.1	42,875	Explosive Safety Requirements: Note 1
		1.2	42,875	
		1.3	50,000	Site Plan: PACAF-OSAN-94-S11
		1.4	PC	
Cargo Apron "A"	Cargo Apron "A" (Doorstop)	1.1	0	*Explosive Safety Requirements: Note 7
		1.2	0	
		1.3	*99	
		1.4	*PC	
Cargo Apron "B"	Cargo Apron "B" (AMC Terminal)	1.1	0	*Explosive Safety Requirements: Note 7
		1.2	0	
		1.3	*99	
		1.4	*PC	
Cargo Apron "C" Spots 1,2,5,6,7	Aircraft Explosive Cargo Parking Area	1.1	0	Explosive Safety Requirements: Note 1 & *8
		1.2	0	
	*1.3	30,000	Site Plan: PACAF-OSAN-93-S01	
	1.4	PC		
Cargo Apron "C" Spots 3, 4	Aircraft Explosive Cargo Parking Area	1.1	0	Explosive Safety Requirements: Note 1
		1.2	0	
	1.3	10,000	Site Plan: PACAF-OSAN-93-S01	
	1.4	PC		
Cargo Apron "C" Spots 3, 4	Cargo Apron "C" (AMC Ramp)	1.3	10,000	Site Plan: PACAF-OSAN-93-S01
		1.4	PC	

NOTES:

1: Explosive Safety Requirement Considerations: GOV and powered age equipment parking will be at least 100 feet from explosives. Temporary parking of GOV and AGE, other than those being loaded or unloaded, will not be parked closer than 25 feet to any explosives. Temporary means the length of time for which the presence of the vehicle/AGE is essential to completion of a single task. This restriction does not apply to approved operations inside HAS's.

2: Procedures in PACAF 21-101, 51 FW SUP-1 will be adhered to in regards to allowing only mission essential traffic.

3: Bioremediation land farm. There will be no operations allowed during times when munitions are present on Hot Cargo Pad.

4: Munitions Capability Exercise (CAPEX). During CAPEX, End of Runway shack (West End) will be closed and all aircraft on west ramp will be removed.

5: Cargo aircraft and transient combat aircraft containing only HC/D 1.4 ammunition or less than 100 pounds of HC/D 1.3 explosives are exempt from Quantity Distance (Q-D) and do not require a site plan. Park these aircraft in designated aircraft parking areas.

6: The Net Explosive Weight is limited to 5,000 pounds of HC/D 1.3 and capacity HC/D 1.4 whenever there are aircraft in adjacent spots to prevent Intermagazine (IM) violations.

7: * IAW AFMAN 91-201, paragraph 3.25.5. Cargo aircraft and transient combat aircraft containing only HC/D 1.4 ammunition or less than 100 pounds of HC/D 1.3 explosives are exempt from Q-D and do not require a site plan.

8: * Spot 1 is limited to 15,000 lbs NEW due to the location of MHE building #667.

Attachment 3

STORAGE AREAS AND OPERATING LOCATIONS FOR EXPLOSIVES AND MUNITIONS

READY SERVICE ALLEY'S (Between Korean Flow-Thru's, from East to West)

SITE	DESCRIPTION	HC/D	NEW	SAFETY/COMPENSATORY ACTIONS & SITE PLAN INFO
Service Alley #1	Flightline Munitions Holding Area (Service Alley Between Korean Flow-Thru's 1688 and 1689) Ready Service Magazine	1.1	4,688	Explosive Safety Requirements: Note 1
		1.2	4,688	Compensatory Actions: Note 2
		1.3	4,688	Site Plan: PACAF-OSAN-78-E-01 and
		1.4	4,688	SECAF Approval Letter dated 18 Jan 82
Service Alley #2	Flightline Munitions Holding Area (Service Alley Between Korean Flow-Thru's 1690 and 1691) Ready Service Magazine	1.1	4,688	Explosive Safety Requirements: Note 1
		1.2	4,688	Compensatory Actions: Note 2
		1.3	4,688	Site Plan: PACAF-OSAN-78-E-03 and
		1.4	4,688	SECAF Approval Letter dated 18 Jan 82
Service Alley #3	Flightline Munitions Holding Area (Service Alley Between Korean Flow-Thru's 1692 and 1693) Ready Service Magazine	1.1	4,688	Explosive Safety Requirements: Note 1
		1.2	4,688	Compensatory Actions: Note 2
		1.3	4,688	Site Plan: PACAF-OSAN-78-E-05 and
		1.4	4,688	SECAF Approval Letter dated 18 Jan 82
Service Alley #4	*Flightline Munitions Holding Area (Service Alley Between Korean Flow-Thru's 1894 and 1895) Ready Service Magazine	1.1	4,688	Explosive Safety Requirements: Note 1
		1.2	4,688	Compensatory Actions: Note 2
		1.3	4,688	Site Plan: PACAF-OSAN-78-E-07 and
		1.4	4,688	SECAF Approval Letter dated 18 Jan 82
Service Alley #5	*Flightline Munitions Holding Area (Service Alley Between Korean Flow-Thru's 1896 and 1897) Ready Service Magazine	1.1	4,688	Explosive Safety Requirements: Note 1
		1.2	4,688	Compensatory Actions: Note 2
		1.3	4,688	Site Plan: PACAF-OSAN-78-E-09 and
		1.4	4,688	SECAF Approval Letter dated 18 Jan 82

NOTES:

1: Explosive Safety Requirement Considerations: GOV and powered age equipment parking will be at least 100 feet from explosives. Temporary parking of GOV and AGE, other than those being loaded or unloaded, will not be parked closer than 25 feet to any explosives. Temporary means the length of time for which the presence of the vehicle/AGE is essential to completion of a single task.

2: Munitions must be positioned at least 10 feet from revetment walls.

DELTA SITE

SITE	DESCRIPTION	HC/D	NEW	SAFETY/COMPENSATORY ACTIONS & SITE PLAN INFO
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Bldg 2422	Operating Location, Barricaded (Munitions Inspection Facility)	1.1 (04)1.2 1.3 1.4	5,513 PC 10,000 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-96-S58 with SECAF Exemption 86-E1
Bldg 2424 TIER 1	Operating Location, Barricaded (PGM Maintenance Facility)	1.1 1.2.1≤178 1.2.2 1.2.3 1.3 1.4	5,513 2,833 10,000 10,000 10,000 10,000	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-01-S25 with SECAF Exemption 86-E1
Bldg 2424 TIER 2	Operating Location, Barricaded (PGM Maintenance Facility)	(14)1.1 (04)1.2 1.3 1.4	42,000 PC 10,000 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: Note 5 Site Plan: PACAF-OSAN-96-S62 with SECAF Exemption 86-E1
Bldg 2426	Earth-Covered Igloo (Drive-thru)	1.1 1.2.1 1.2.2 1.2.3 1.3 1.4	8,000 NONE 50,000 83,000 50,000 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: Note 4 Site Plan: PACAF-OSAN-01-S26 with SECAF Exemption 86-E1
Bldg 2428	Earth-Covered Igloo (Drive-thru)	1.1 1.2.1 1.2.2 1.2.3 1.3 1.4	4,096 NONE 50,000 500,000 24,000 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-01-S27 with SECAF Exemption 86-E1
Bldg 2429	Operating Location, Barricaded (Conventional Maintenance)	1.1 (04)1.2 1.3 1.4	6,162 PC 10,000 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-96-S60 with SECAF Exemption 86-E1

Bldg 2430	Earth-Covered Igloo (Drive-thru)	1.1	4,096	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-01-S28 with SECAF Exemption 86-E1
		1.2.1	NONE	
		1.2.2	50,000	
		1.2.3	500,000	
		1.3	10,000	
		1.4	PC	
Bldg 2431 (7210)	Above-Ground Magazine, Barricaded – Patriot Missile Storage	1.1	8,475	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-01-S29 with SECAF Exemption 86-E1
		1.2.1 \leq 450	6,430	
		1.2.2	17,545	
		1.2.3	286,250	
		1.3	55,000	
		1.4	PC	
Bldg 2432	Earth-Covered Igloo	1.1	70,500	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-01-S30 with SECAF Exemption 86-E1
		1.2.1 $>$ 450	500,000	
		1.2.2	500,000	
		1.2.3	500,000	
		1.3	203,000	
		1.4	PC	
Bldg 2434	Earth-Covered Igloo	1.1	103,400	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-01-S47 with SECAF Exemption 86-E1
		1.2.1 $>$ 450	500,000	
		1.2.2	500,000	
		1.2.3	500,000	
		1.3	402,000	
		1.4	PC	
Bldg 2436	Earth-Covered Igloo	1.1	126,350	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-01-S32 with SECAF Exemption 86-E1
		1.2.1 $>$ 450	500,000	
		1.2.2	500,000	
		1.2.3	500,000	
		1.3	160,000	
		1.4	PC	
Bldg 2438	Earth-Covered Igloo	1.1	123,055	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-01-S33 with SECAF Exemption 86-E1
		1.2.1 $>$ 450	500,000	
		1.2.2	500,000	
		1.2.3	500,000	
		1.3	160,000	
		1.4	PC	

Bldg 2440	Earth-Covered Igloo	1.1	116,340	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-01-S34 with SECAF Exemption 86-E1
		1.2.1>450	500,000	
		1.2.2	500,000	
		1.2.3	500,000	
		1.3	160,000	
		1.4	PC	
Bldg 2441	Earth-Covered Igloo	1.1	54,870	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-01-S35 with SECAF Exemption 86-E1
		1.2.1≤99	500,000	
		1.2.2	500,000	
		1.2.3	500,000	
		1.3	156,000	
		1.4	PC	
Bldg 2442	Earth-Covered Igloo	1.1	110,608	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-01-S36 with SECAF Exemption 86-E1
		1.2.1>450	500,000	
		1.2.2	500,000	
		1.2.3	500,000	
		1.3	160,000	
		1.4	PC	
Bldg 2443	Earth-Covered Igloo	1.1	54,870	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-01-S37 with SECAF Exemption 86-E1
		1.2.1≤99	500,000	
		1.2.2	500,000	
		1.2.3	500,000	
		1.3	156,000	
		1.4	PC	
Bldg 2444	Earth-Covered Igloo	1.1	29,300	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-01-S38 with SECAF Exemption 86-E1
		1.2.1≤300	500,000	
		1.2.2	500,000	
		1.2.3	500,000	
		1.3	426,000	
		1.4	PC	
Bldg 2445	Earth-Covered Igloo	1.1	56,300	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-96-S45 with SECAF Exemption 86-E1
		1.2.1≤99	500,000	
		1.2.2	500,000	
		1.2.3	500,000	
		1.3	166,000	
		1.4	PC	

Bldg 2446	Earth-Covered Igloo	1.1	100,500	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-01-S40 with SECAF Exemption 86-E1
		1.2.1>450	500,000	
		1.2.2	500,000	
		1.2.3	500,000	
		1.3	160,000	
		1.4	PC	
Bldg 2447	Earth-Covered Igloo	1.1	75,050	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-01-S41 with SECAF Exemption 86-E1
		1.2.1≤99	286,255	
		1.2.2	500,000	
		1.2.3	500,000	
		1.3	175,000	
		1.4	PC	
Bldg 2448	Earth-Covered Igloo	1.1	118,800	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-01-S42 with SECAF Exemption 86-E1
		1.2.1>450	500,000	
		1.2.2	500,000	
		1.2.3	500,000	
		1.3	160,000	
		1.4	PC	
Bldg 2450	Earth-Covered Igloo	1.1	118,800	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-01-S43 with SECAF Exemption 86-E1
		1.2.1>450	500,000	
		1.2.2	500,000	
		1.2.3	500,000	
		1.3	160,000	
		1.4	PC	
Bldg 2451	Above-Ground Magazine, Barricaded	1.1	54,872	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-01-S44 with SECAF Exemption 86-E1
		1.2.1≤450	200,000	
		1.2.2	500,000	
		1.2.3	500,000	
		1.3	156,000	
		1.4	PC	
Bldg 2452	Earth-Covered Igloo	1.1	115,750	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-01-S45 with SECAF Exemption 86-E1
		1.2.1>450	500,000	
		1.2.2	500,000	
		1.2.3	500,000	
		1.3	160,000	
		1.4	PC	

Bldg 2454	Earth-Covered Igloo	1.1	110,592	Explosive Safety Requirements: Note 1
		1.2.1 >450	500,000	Compensatory Actions: None
		1.2.2	500,000	
		1.2.3	500,000	
		1.3	160,000	Site Plan: PACAF-OSAN-01-S46 with SECAF Exemption 86-E1
		1.4	PC	
DELTA PAD (ES-7) TIER 1	Above Ground Magazine, (ISO Pad)	1.1	11,990	Explosive Safety Requirements: Note 1
		1.2.1 ≤300	14,090	Compensatory Actions: Note 2
		1.2.2	50,000	
		1.2.3	500,000	
		1.3	28,000	Site Plan: PACAF-OSAN-01-S31 with SECAF Exemption 86-E1
		1.4	PC	
DELTA PAD (ES-7) TIER 2	Above-Ground Magazine, (ISO Pad)	1.1	30,517	Explosive Safety Requirements: Note 1
		(04)1.2	PC	Compensatory Actions: Notes 2 & 3
		1.3	28,000	
		1.4	PC	Site Plan: PACAF-OSAN-96-S50 with SECAF Exemption 86-E1

NOTES:

1: Explosive Safety Requirement Considerations: GOV and powered age equipment parking will be at least 100 feet from explosives. Temporary parking of GOV and AGE, other than those being loaded or unloaded, will not be parked closer than 25 feet to any explosives. Temporary means the length of time for which the presence of the vehicle/AGE is essential to completion of a single task.

2: Pad size is 110' X 100'. Pad will be marked with painted lines indicating size.

3: Building 2429 is restricted from use and must be evacuated when this tier (2) is activated (This compensatory action eliminates Intraline (IL) violations).

4: A ten-foot zone inside igloo 2426 is restricted from explosive storage. This zone will be marked with a painted line on the igloo floor (This compensatory action changes the exposures between 2426 and 2444 from "front-to-front" to "front-to-side." This action also increases NEW capacity in 2444 and permits HC/D 1.1 storage at 2426.)

5: Buildings 2421, 1516, "Charlie" Patriot Battery Control Section, and 2402 will operate at minimum occupancy when this tier (2) is activated.

Buildings 2422, 2423, 2429, and Furniture Warehouse Office (located East of buildings 2474 and 2475) are restricted from use and must be evacuated when this tier (2) is activated.

These compensatory actions must be included in Munitions Storage Area operating instructions

OSAN MAGNUM

SITE	DESCRIPTION	HC/D	NEW	SAFETY/COMPENSATORY ACTIONS & SITE PLAN INFO
Bldg 54102	Earth-Covered Igloo	1.1 (18)1.2 (12)1.2 (08)1.2 (04)1.2 1.3 1.4	250,000 PC PC PC PC PC PC	Explosive Safety Requirements: Notes 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN-MAGNUM-90-R01 with SECAF Exemption 78-E1
Bldg 54103	Earth-Covered Igloo	* 1.1 (18)1.2 (12)1.2 (08)1.2 (04)1.2 1.3 1.4	233,750 PC PC PC PC PC PC	Explosive Safety Requirements: Notes 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN-MAGNUM-90-R02 with SECAF Exemption 78-E1
Bldg 54104	Earth-Covered Igloo	1.1 (18)1.2 (12)1.2 (08)1.2 (04)1.2 1.3 1.4	161,384 PC PC PC PC PC PC	Explosive Safety Requirements: Notes 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN-MAGNUM-90-R03 with SECAF Exemption 78-E1
Bldg 54105	Earth-Covered Igloo	1.1 (18)1.2 (12)1.2 (08)1.2 (04)1.2 1.3 1.4	78,280 PC PC PC PC PC PC	Explosive Safety Requirements: Notes 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN-MAGNUM-90-R04 with SECAF Exemption 78-E1

Bldg 54106	Earth-Covered Igloo	1.1 (18)1.2 (12)1.2 (08)1.2 (04)1.2 1.3 1.4	87,791 PC PC PC PC PC PC	Explosive Safety Requirements: Notes 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN-MAGNUM-90-R05 with SECAF Exemption 78-E1
Bldg 54107	Earth-Covered Igloo	1.1 (18)1.2 (12)1.2 (08)1.2 (04)1.2 1.3 1.4	171,467 PC PC PC PC PC PC	Explosive Safety Requirements: Notes 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN-MAGNUM-90-R06 with SECAF Exemption 78-E1
Bldg 54108	Earth-Covered Igloo	*1.1 (18)1.2 (12)1.2 (08)1.2 (04)1.2 1.3 1.4	242,970 PC PC PC PC PC PC	Explosive Safety Requirements: Notes 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN-MAGNUM-90-R07 with SECAF Exemption 78-E1
Bldg 54109	Earth-Covered Igloo	1.1 (18)1.2 (12)1.2 (08)1.2 (04)1.2 1.3 1.4	250,000 PC PC PC PC PC PC	Explosive Safety Requirements: Notes 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN-MAGNUM-90-R08 with SECAF Exemption 78-E1
Bldg 54110	Earth-Covered Igloo	1.1 (18)1.2 (12)1.2 (08)1.2 (04)1.2 1.3 1.4	250,000 PC PC PC PC PC PC	Explosive Safety Requirements: Notes 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN-MAGNUM-90-R09 with SECAF Exemption 78-E1

Bldg 54111	Earth-Covered Igloo	1.1 (18)1.2 (12)1.2 (08)1.2 (04)1.2 1.3 1.4	250,000 PC PC PC PC PC PC	Explosive Safety Requirements: Notes 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN-MAGNUM-90-R10 with SECAF Exemption 78-E1
Bldg 54112	Earth-Covered Igloo	1.1 (18)1.2 (12)1.2 (08)1.2 (04)1.2 1.3 1.4	250,000 PC PC PC PC PC PC	Explosive Safety Requirements: Notes 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN-MAGNUM-90-R11 with SECAF Exemption 78-E1
Bldg 54113	Above-Ground Magazine, Barricaded, (Maintenance and Inspection Facility)	*1.1 *(18) 1.2 *(12) 1.2 *(08) 1.2 (04) 1.2 1.3 1.4	35,000 35,000 35,000 35,000 PC 300,000 PC	Explosive Safety Requirements: Notes 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN-MAGNUM-90-R12 with SECAF Exemption 78-E1
Bldg 54114	Above-Ground Magazine, Barricaded	1.1 (18)1.2 (12)1.2 (08)1.2 (04)1.2 1.3 1.4	37,037 37,037 37,037 37,037 PC 300,000 PC	Explosive Safety Requirements: Notes 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN-MAGNUM-90-R13 with SECAF Exemption 78-E1
Bldg 54115	Above-Ground Magazine, Barricaded	1.1 (18)1.2 (12)1.2 (08)1.2 (04)1.2 1.3 1.4	234,505 PC PC PC PC 400,000 PC	Explosive Safety Requirements: Notes 1 & 2 Compensatory Actions: None Site Plan: PACAF-OSAN-MAGNUM-90-R14 with SECAF Exemption 78-E1

NOTES:

1: Explosive Safety Requirement Considerations: GOV and powered age equipment parking will be at least 100 feet from explosives. Temporary parking of GOV and AGE, other than those being loaded or unloaded, will not be parked closer than 25 feet to any explosives. Temporary means the length of time for which the presence of the vehicle/AGE is essential to completion of a single task

2: (18,12) 1.2 are limited to 500,000lbs. IAW AFMAN 91-201.

ALLPHA SITE

SITE	DESCRIPTION	HC/D	NEW	SAFETY/COMPENSATORY ACTIONS & SITE PLAN INFO
Bldg S-2	Above-Ground Magazine, Barricaded	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	55,000 55,000 500,000 40,000 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-93-R01 with SECAF Exemption 86-E1
Bldg S-5	Above-Ground Magazine, Barricaded	(14)1.1 (08)1.2 (04)1.2 1.3 1.4	31,754 31,754 31,754 80,000 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-93-R02 with SECAF Exemption 86-E1
Bldg S-6	Above-Ground Magazine, Barricaded	1.1 (08)1.2 (04)1.2 1.3 1.4	30,518 30,518 30,518 80,000 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-93-R03 with SECAF Exemption 86-E1
Bldg S-8	Above-Ground Magazine, Barricaded	(14)1.1 (12)1.2 (08)1.2 (04)1.2 1.3 1.4	37,037 37,037 37,037 500,000 100,000 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-93-R04 with SECAF Exemption 86-E1
Bldg S-9	Above-Ground Magazine, Barricaded	(14)1.1 (12)1.2 (08)1.2 (04)1.2 1.3 1.4	100,000 100,000 100,000 500,000 260,000 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-93-R05 with SECAF Exemption 86-E1

Bldg S-13	Above-Ground Magazine (Maintenance and Inspection Facility)	1.1	425	Explosive Safety Requirements: Note 1 Compensatory Actions: Note 2 *Explosive Safety Requirements: Note 3 Site Plan: PACAF-OSAN-93-R06 with SECAF Exemption 86-E1
		(12)1.2	425	
		(08)1.2	425	
		(04)1.2	500,000	
		1.3	*Note 3	
		1.4	PC	
Bldg S-14	Above-Ground Magazine, Barricaded	1.1	4,000	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-93-R07 with SECAF Exemption 86-E1
		(04)1.2	4,000	
		1.3	10,000	
		1.4	PC	
Bldg S-15	Above-Ground Magazine, Barricaded	1.1	1,142	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-93-R08 with SECAF Exemption 86-E1
		(08)1.2	1,142	
		(04)1.2	1,142	
		1.3	16,000	
		1.4	PC	
Bldg S-18	Above-Ground Magazine, Barricaded	(14)1.1	96,281	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-93-R09 with SECAF Exemption 86-E1
		(12)1.2	96,281	
		(08)1.2	96,281	
		(04)1.2	500,000	
		1.3	200,000	
		1.4	PC	
Bldg S-20	Above-Ground Magazine, Barricaded	(14)1.1	69,765	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-93-R10 with SECAF Exemption 86-E1
		(12)1.2	69,765	
		(08)1.2	69,765	
		(04)1.2	500,000	
		1.3	187,000	
		1.4	PC	
Bldg S-25	Above-Ground Magazine, Barricaded	(14)1.1	101,629	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-93-R11 with SECAF Exemption 86-E1
		(12)1.2	101,629	
		(08)1.2	101,629	
		(04)1.2	500,000	
		1.3	230,000	
		1.4	PC	

Bldg S-26	Above-Ground Magazine, Barricaded	(14)1.1	101,629	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-93-R12 with SECAF Exemption 86-E1
		(12)1.2	101,629	
		(08)1.2	101,629	
		(04)1.2	500,000	
		1.3	260,000	
		1.4	PC	
Bldg S-30	Above-Ground Magazine, Barricaded	(14)1.1	101,629	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-93-R13 with SECAF Exemption 86-E1
		(12)1.2	101,629	
		(08)1.2	101,629	
		(04)1.2	500,000	
		1.3	260,000	
		1.4	PC	
Bldg S-31	Above-Ground Magazine, Barricaded	(14)1.1	101,629	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-93-R14 with SECAF Exemption 86-E1
		(12)1.2	101,629	
		(08)1.2	101,629	
		(04)1.2	500,000	
		1.3	55,000	
		1.4	PC	
Bldg S-32	Above-Ground Magazine, Barricaded	(14)1.1	101,629	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-93-R15 with SECAF Exemption 86-E1
		(12)1.2	101,629	
		(08)1.2	101,629	
		(04)1.2	500,000	
		1.3	230,000	
		1.4	PC	
Bldg S-35	Above-Ground Magazine, Barricaded	(14)1.1	101,629	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-93-R16 with SECAF Exemption 86-E1
		(12)1.2	101,629	
		(08)1.2	101,629	
		(04)1.2	500,000	
		1.3	240,000	
		1.4	PC	

Bldg S-36	Above-Ground Magazine, Barricaded three sides (Open Storage Pad)	(14)1.1	160,000	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-93-R17 with SECAF Exemption 86-E1
		(18)1.2	500,000	
		(12)1.2	500,000	
		(08)1.2	500,000	
		(04)1.2	500,000	
		1.3	370,000	
		1.4	PC	
Bldg S-37	Above-Ground Magazine, Barricaded three-sides (Open Storage Pad)	(14)1.1	160,000	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-93-R18 with SECAF Exemption 86-E1
		(18)1.2	500,000	
		(12)1.2	500,000	
		(08)1.2	500,000	
		(04)1.2	500,000	
		1.3	370,000	
		1.4	PC	
Bldg S-38	Above-Ground Magazine, Barricaded	1.1	0	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-93-R19 with SECAF Exemption 86-E1
		1.2	0	
		1.3	0	
		1.4	PC	
Bldg S-200	Earth-Covered Igloo, Barricaded (14-Bay Multi-Cell Igloo)	1.1	3,000	Explosive Safety Requirements: Note 1 Compensatory Actions: Note 2 Site Plan: PACAF-OSAN-93-R20 with SECAF Exemption 86-E1
		(12)1.2	500,000	
		(08)1.2	500,000	
		(04)1.2	500,000	
		*1.3	55,000	
		1.4	PC	

NOTES:

1: Explosive Safety Requirement Considerations: GOV and powered age equipment parking will be at least 100 feet from explosives. Temporary parking of GOV and AGE, other than those being loaded or unloaded, will not be parked closer than 25 feet to any explosives. Temporary means the length of time for which the presence of the vehicle/AGE is essential to completion of a single task.

2: NEW limits apply to each cell.

3: * Intermagazine protection is provided by the walls for 5,000 pounds of properly packaged HC/D 1.3 and 300 pounds NEW if unpackaged. Intraline separation must be used if operations are involved; therefore concurrent operations in adjoining bays are not authorized.

PRELOAD AREA-TIER 1

SITE	DESCRIPTION	HC/D	NEW	SAFETY/COMPENSATORY ACTIONS & SITE PLAN INFO
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Bldg 1830	Operating Location, Barricaded (Munitions Maintenance Facility)	1.1 (04)1.2 1.3 1.4	0 5,000 17,142 OpLim	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-96-S12
Bldg 1832	Flightline Munitions Holding Area, Barricaded three sides (Ready Service Magazine)	1.1 (04)1.2 1.3 1.4	7.4 5,000 10,000 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: Note 2 & 3 Site Plan: PACAF-OSAN-96-S14
Bldg 1833	Operating Location, Barricaded (Munitions Maintenance Facility)	1.1 (04)1.2 1.3 1.4	8,400 5,000 PC PC	Explosive Safety Requirements: Note 1 & 4 Compensatory Actions: Site Plan: PACAF-OSAN-96-S16
Bldg 1835	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	1.1 (04)1.2 1.3 1.4	1,825 10,000 10,000 PC	Explosive Safety Requirements: Note 1 & 5 Compensatory Actions: None Site Plan: PACAF-OSAN-96-S10 with SECAF Exemption 86-E1
Bldg 1836	Operating Location, Barricaded (Munitions Maintenance Facility)	1.1 (04)1.2 1.3 1.4	10,000 10,000 OpLim OpLim	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-96-S9 with SECAF Exemption 86-E1
Bldg 1839 Cell 1	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	(14)1.1 (04)1.2 1.3 1.4	2,086 2,086 2,086 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-96-S7 with SECAF Exemption 86-E1
Bldg 1839 Cell 2	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	(14)1.1 (04)1.2 1.3 1.4	5,108 5,108 5,108 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-96-S7 with SECAF Exemption 86-E1
Bldg 1839 Cell 3	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	(14)1.1 (04)1.2 1.3 1.4	9,408 9,408 9,408 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-96-S7 with SECAF Exemption 86-E1
Bldg 1839 Cell 4	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	(14)1.1 (04)1.2 1.3 1.4	14,606 14,606 14,606 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-96-S7 with SECAF Exemption 86-E1

Bldg 1839 Cell 5	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	(14)1.1	18,000	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-96-S7 with SECAF Exemption 86-E1
		(04)1.2	18,000	
		1.3	18,000	
		1.4	PC	
Bldg 1839 Cell 6	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	(14)1.1	18,000	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-96-S7 with SECAF Exemption 86-E1
		(04)1.2	18,000	
		1.3	18,000	
		1.4	PC	
Bldg 1839 Cell 7	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	(14)1.1	18,000	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-96-S7 with SECAF Exemption 86-E1
		(04)1.2	18,000	
		1.3	18,000	
		1.4	PC	
Bldg 1839 Cell 8	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	(14)1.1	18,000	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-96-S7 with SECAF Exemption 86-E1
		(04)1.2	18,000	
		1.3	18,000	
		1.4	PC	
Bldg 1839 Cell 9	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	(14)1.1	18,000	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-96-S7 with SECAF Exemption 86-E1
		(04)1.2	18,000	
		1.3	18,000	
		1.4	PC	
Bldg 1839 Cell 10	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	(14)1.1	18,000	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-96-S7 with SECAF Exemption 86-E1
		(04)1.2	18,000	
		1.3	18,000	
		1.4	PC	
Bldg 1839 Cell 11	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	(14)1.1	18,000	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-96-S7 with SECAF Exemption 86-E1
		(04)1.2	18,000	
		1.3	18,000	
		1.4	PC	
Bldg 1840	Above-Ground Magazine	1.1	0	Explosive Safety Requirements: Note 1 Compensatory Actions: None Site Plan: PACAF-OSAN-96-S19
		(04)1.2	0	
		1.3	0	
		1.4	PC	

NOTES:

1: Explosive Safety Requirement Considerations: GOV and powered age equipment parking will be at least 100 feet from explosives. Temporary parking of GOV and AGE, other than those being loaded or unloaded, will not be parked closer than 25 feet to any explosives. Temporary means the length of time for which the presence of the vehicle/AGE is essential to completion of a single task.

2: HC/D 1.1 & 1.2 munitions will be placed behind painted line (40 ft. from rear of pad) to prevent IM violations. Pad will be marked with painted lines indicating size.

3: AIM-9 warheads must be separated by 22 inches or more, or not radially aligned to maintain Maximum Credible Event (MCE) of 7.4 pounds.

4: Explosive operations and storage are only authorized on the South side pad in front of bldg 1833. Refer to Base Comprehensive map for clarification.

5: Explosive operations and storage are only authorized on the South side pad , on the golf course side of bldg 1835. Refer to Base Comprehensive map for clarification.

Bldg 1830	Operating Location, Barricaded (Munitions Maintenance Facility)	(14)1.1 (04)1.2 1.3 1.4	4,600 OPLIM OPLIM OPLIM	Explosive Safety Requirements: Note 1 Compensatory Actions: Notes 5 & 6 Site Plan: PACAF-OSAN-96-S13 with SECAF Exemption 86-E1
Bldg 1832	Flightline Munitions Holding Area, Barricaded three sides (Ready Service Magazine)	(14)1.1 (04)1.2 1.3 1.4	12,700 12,700 12,700 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: Notes 6,7,8, & 9 Site Plan: PACAF-OSAN-96-S15 with SECAF Exemption 86-E1
Bldg 1833	Operating Location, Barricaded three sides (Munitions Maintenance Facility)	1.1 1.2.1 1.2.2 1.2.3 1.3 1.4	40,000 604 107,205 140,000 140,000 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: Notes 3,4,8 & 9 Site Plan: PACAF-OSAN-00-S2 with SECAF Exemption 86-E1
Bldg 1835, 1836 and Pads	Rapid Assembly Munitions (RAMS)	(14)1.1 (08)1.2 1.3 1.4	42,000 OPLIM OPLIM OPLIM	Explosive Safety Requirements: Note 1 Compensatory Actions: Notes 3, 8 & 10 Site Plan: PACAF-OSAN-96-S11 with SECAF Exemption 86-E1
Bldg 1839 Cell 1	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	(14)1.1 (04)1.2 1.3 1.4	18,000 18,000 18,000 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: Note 2 Site Plan: PACAF-OSAN-96-S8 with SECAF Exemption 86-E1

Bldg 1839 Cell 2	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	(14)1.1 (04)1.2 1.3 1.4	18,000 18,000 18,000 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: Note 2 Site Plan: PACAF-OSAN-96-S8 with SECAF Exemption 86-E1
Bldg 1839 Cell 3	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	(14)1.1 (08)1.2 1.3 1.4	18,000 18,000 18,000 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: Note 2 Site Plan: PACAF-OSAN-96-S8 with SECAF Exemption 86-E1
Bldg 1839 Cell 4	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	(14)1.1 (08)1.2 1.3 1.4	18,000 18,000 18,000 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: Note 2 Site Plan: PACAF-OSAN-96-S8 with SECAF Exemption 86-E1
Bldg 1839 Cell 5	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	(14)1.1 (08)1.2 1.3 1.4	18,000 18,000 18,000 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: Note 2 Site Plan: PACAF-OSAN-96-S8 with SECAF Exemption 86-E1
Bldg 1839 Cell 6	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	(14)1.1 (08)1.2 1.3 1.4	18,000 18,000 18,000 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: Note 2 Site Plan: PACAF-OSAN-96-S8 with SECAF Exemption 86-E1
Bldg 1839 Cell 7	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	(14)1.1 (08)1.2 1.3 1.4	18,000 18,000 18,000 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: Note 2 Site Plan: PACAF-OSAN-96-S8 with SECAF Exemption 86-E1
Bldg 1839 Cell 8	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	(14)1.1 (08)1.2 1.3 1.4	18,000 18,000 18,000 PC	Explosive Safety Requirements: Note 1 Compensatory Actions: Note 2 Site Plan: PACAF-OSAN-96-S8 with SECAF Exemption 86-E1

Bldg 1839 Cell 9	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	(14)1.1	18,000	Explosive Safety Requirements: Note 1 Compensatory Actions: Note 2 Site Plan: PACAF-OSAN-96-S8 with SECAF Exemption 86-E1
		(08)1.2	18,000	
		1.3	18,000	
		1.4	PC	
Bldg 1839 Cell 10	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	(14)1.1	18,000	Explosive Safety Requirements: Note 1 Compensatory Actions: Note 2 Site Plan: PACAF-OSAN-96-S8 with SECAF Exemption 86-E1
		(08)1.2	18,000	
		1.3	18,000	
		1.4	PC	
Bldg 1839 Cell 11	Flightline Munitions Holding Area, Barricaded (Ready Service Magazine)	(14)1.1	18,000	Explosive Safety Requirements: Note 1 Compensatory Actions: Note 2 Site Plan: PACAF-OSAN-96-S8 with SECAF Exemption 86-E1
		(08)1.2	18,000	
		1.3	18,000	
		1.4	PC	

NOTES:

1: Explosive Safety Requirement Considerations: GOV and powered age equipment parking will be at least 100 feet from explosives. Temporary parking of GOV and AGE, other than those being loaded or unloaded, will not be parked closer than 25 feet to any explosives. Temporary means the length of time for which the presence of the vehicle/AGE is essential to completion of a single task.

2: The fire training area (Building 1883) is closed during exercises, contingencies, and wartime.

3: Pads outside both RAMS facilities and 1833 are currently not equipped with a lightning protection system. When explosives are on Pads and lightning storms are within 5 miles, all personnel must be evacuated to PTR distance (834 Feet for maximum 42,000 lbs. NEW and 821 Feet for max of 40,000 lbs. NEW respectively).

4: Controlling actions:

a. Minimize all operations to mission essential personnel only for Bldgs. 1765, 1766, 1830 when tier two is activated for this facility.

b. When at all possible, do not park aircraft on Alpha Diamond hardstands A-9, A-10, A-11, A-12, A-13, and A-15 during implementation of this tier. A-11 should only be used as a last resort. Explosives may be utilize however, upon approving this, commander accepts the risk to aircraft should mishap occurs.

c. When possible, minimize HC/D 1.1 to no more than 24,109 lbs at 1835/1836 and no more than 24,109 lbs at 1833 for adequate safety of propagation of explosives. However, when deemed mission essential, an increase to max allowable NEW in Bldg 1833 is authorized.

5: A13 (Alpha Diamond) will not be used anytime 1830 is operating in Tier 2.

This compensatory action must be included in Munitions Storage Area operating instructions

6: Bldg. 1835 and adjoining Pad will only be activated when absolutely necessary to support deployed units.

7: HC/D 1.1 & 1.2 munitions will be placed behind painted line (40 ft. from rear of pad) to prevent IM violations. Pad will be marked with painted lines indicating size.

8: Holes 14 and 15 of Golf Course will be closed when this tier (2) is activated.

9: AIM-9 warheads must be separated by 22 inches or more, or not radially aligned to maintain Maximum Credible Event (MCE) of 7.4 pounds.

10: Facilities 1835, 1836 and pads South of 1835 & North/South of 1836 are sited as a single PES.

PATRIOT MISSILE SITES “CHARLIE & DELTA” & EOD PROFICIENCY RANGE “BETA SITE”

SITE	DESCRIPTION	HC/D	NEW	SAFETY/COMPENSATORY ACTIONS & SITE PLAN INFO
Patriot Missile Site, “Charlie Battery”	Defensive Missile Battery, Charlie Battery (South)	(08)1.1 1.2 1.3 1.4	5,024 0 0 0	Explosive Safety Requirements: Note 1 Compensatory Actions: Site Plan: PACAF-OSAN-95-S14 with SECAF Exemption 86-E1
Patriot Missile Site, “Delta Battery”	Defensive Missile Battery, Delta Battery (North)	(08)1.1 1.2 1.3 1.4	580 0 0 0	Explosive Safety Requirements: Note 1 Compensatory Actions: Site Plan: PACAF-OSAN-95-S15 with SECAF Exemption 86-E1
EOD Proficiency Range	Explosive Ordnance Disposal Range, Beta Site	1.1 1.2 1.3 1.4	1.25 0 0 0	Explosive Safety Requirements: Note 1 & 2 Compensatory Actions: Site Plan: PACAF-OSAN-95-S15 with SECAF Exemption 86-E1

NOTES:

1: Explosive Safety Requirement Considerations: GOV and powered age equipment parking will be at least 100 feet from explosives. Temporary parking of GOV and AGE, other than those being loaded or unloaded, will not be parked closer than 25 feet to any explosives. Temporary means the length of time for which the presence of the vehicle/AGE is essential to completion of a single task.

2: Explosive charge initiation point will be fully sandbagged, per AFMAN 91-201 to prevent fragmentation and FOD hazards.

Attachment 4

EXPLOSIVE WEIGHTS OF COMMONLY USED MUNITIONS

MUNITIONS	CLASS/DIVISION	NEW
20 MM HEI	1.2.2 E	.0285
20 MM TP/TPT	1.4 C	.0891
20 MM API	1.4 G	.0954
30 MM HEI	1.2.2 E	.4335
30 MM TP	1.4 C	.3310
30 MM API	1.4 C	.3419
AGM 65A	1.1 E	85.0
AGM 65B	1.1 E	85.0
AGM 65D	1.1 E	85.0
AGM 65G	1.1 E	100.0
AGM 88 (IN CONTAINER)	1.2.1 E	45.2
AGM 88 (OUT OF CONTAINER)	(04) 1.1 E	45.2
AIM 120 (IN CONTAINER)	1.2.1 E	16.9
AIM 120 (OUT OF CONTAINER)	(05) 1.1 E	16.9
AIM 9P	(04) 1.1 E	10.5
AIM 9L	(04) 1.1 E	7.4
AIM-9M	(04) 1.1 E	7.4
AIM 7F	(07) 1.1 E	26.1
CBU-58/B	1.2.1 D	158.0
CBU-87	1.1 D	129.0
CBU-89 SERIES	1.1 D	116.1
MK 20	1.1 D	100.0
CHAFF W/SQUIB	1.4 S	.0004
FLARE LUU-2A/B	1.3 G	22.0 X 8 = 176
FLARE M206	1.3 G	.2866
FLARE MJU-7	1.3 G	.6278
MK 82 Warhead	1.1 D	192.0
MK 84 Warhead	1.1 D	945.0
BLU 109 Warhead	1.1 D	535
ROCKETS 2.75 Warhead (TP)	1.3 C	6.4 X 7 = 44.8
ROCKETS 2.75 Warhead (WP)	1.2.1 H	8.6 X 7 = 60.2