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WPAFB FOIA Control Number: 2009-00965-F-NL

Month/Year of Posting to WP EFRR: 07/09

Requested Records: Report

Subject: HQ USAF Logistics Concept - G1AM-03 Weapon System"

Final Official Response Date: 30 July 2009

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GAM-63 Weapon System

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(U) HQ USAF LOGISTICS CONCEPT - GAM-63 WEAPON SYSTEM

I. (UNCL) REFERENCES:

- A. AIR-5-47
- B. B-63 Operational Concept Revised, Hq USAF, 1 November 1954
- C. Letter, this Headquarters, subject "USAF Logistics Objectives", dated 6 July 1953.
- D. Supplementary Guidance - see "Multi-Phase"

II. (UNCL) PURPOSE: To establish logistic guidance for the development of logistic plans for the support of the GAM-63 Weapon System. To this end, this concept will concern itself primarily with those requirements, techniques and procedures which deviate from normal support or pose peculiar problems, due to the inherent characteristics of the weapon system and/or its probable techniques of employment.

III. (UNCL) SCOPE: This concept applies to all USAF activities involved in the support or operation of the GAM-63 Weapon System. However, data appearing in current USAF Program Documents will supersede conflicting data contained herein.

IV. (SECRET) GENERAL:

A. (SECRET) The GAM-63 (RASCAL) is a short-range (75-80 nautical mile) guided aircraft missile designed to operate from low altitudes to approximately 60,000 feet at speeds from ~~1.5~~ ⁵ to 2.7. It will be carried by and operated in conjunction with ~~B-29~~ B-47 aircraft which will be suitably modified to support the GAM-63 director-carrier task. The carrier aircraft will be capable of reconversion to a standard bomber configuration at base level.

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1. The GAM-63 weapon will be an augmentation to the capability of those B-47 and ~~B-36~~ Squadrons specifically designated in OPU-II. These Squadrons will operate from the ZI. They will stage from ZI or overseas bases. Specific locations and operational dates are, or will be, reflected in appropriate programming documents.

2. Warhead information may be found in appropriate programming documents (OPU-II) and supplemental instructions, as available.

B. (SECRET) The operational concept establishes the GAM-63 as an augmentation weapon to aircraft engaged in the strategic offensive against highly defended target complexes. To most effectively accomplish this role, the GAM-63 Weapon System must be geared to the director-carrier aircraft operation in such manner as to impose the least possible penalty thereon.

C. (SECRET) The GAM-63 Weapon System must be released, and therefore carried by director-carrier aircraft. The total number of GAM-63's which will be provided is then a direct function of carrier aircraft which have been programmed; the war planning sortie and attrition rates thereof; and, in peacetime, the number of training, quality control, and model improvement test missiles required. The factors to be used in determining these latter requirements have not yet been developed. They will be included in future programming and planning documents.

D. (SECRET) In view of the operational considerations outlined above, techniques of employment, and the physical characteristics of the weapon system, the following logistical considerations were apparent:

1. The use of ZI operating bases for the weapon system will provide logistic advantages in terms of reduced transport distances and decreased vulnerability of support lines.

2. Since the GAM-63 is a weapon augmentation to the SAC offensive, it can be expected to be used heavily during the early days of the SAC effort and/or against certain hard targets having strong local defenses. Pre-positioning GAM-63 weapons and facilities at ²¹operating bases in such manner as to best insure this required pre-day readiness is therefore mandatory.

3. The total number of GAM-63s which will be required in peace and war has not been determined. Until such time as it is, planning should be directed toward the support of the specific units programmed and their stated operational stocks, plus such training and quality control requirements as can be reasonably forecast. However, the possibility of program expansion must be borne in mind.

4. The complex nature of certain portions of this weapon and its supporting ground equipment, and the specialized effort required, may establish support requirements and skills either in excess of the capabilities generally available in the present Air Force System or which would be uneconomical to establish in any event. Further, establishing the required capability on the scale required for this and similar weapons may not be possible or economical due to manpower ceilings, public works restrictions, etc. For this reason, careful cognizance should be taken of the TM-61 logistic support concept presently undergoing service test. This service test will provide detailed consumption data and qualitative analysis of new techniques and procedures which may prove applicable to the GAM-63 weapon system.

E. (UNCL) The ultimate objective of the GAM-63 logistic planning is to develop the GAM-63 weapon system as a complete package to the end that all programming, funding, procurement and delivery of necessary technical spares

and component parts, engines, ground support equipment, transportation, base facilities, and qualified technicians will be available as necessary to provide complete logistic support, time passed with the receipt of the JAW-43 weapon and carrier-director aircraft. This will require the identification of the 114-item requirements making up the total requirement (including some common items) of the JAW-43 weapon system.

F. ~~(CONFIDENTIAL)~~ Nuclear warhead support for CB-~~47~~ Squadrons will be provided by ^{the SAC Air Base} ~~Aviation Dept Group~~ ^{with backup by the OSS/VSS} as reflected in CPU II.

G. ~~(SECRET)~~ Planning action should not be restricted to existing directives, regulations, policies and procedures, but should be directed in such manner as to provide accurate and flexible support for the JAW-43 Weapon System. Required actions and procedures deviating from existing policies and procedures will be clearly indicated and implications noted in the AMC JAW-43 Logistic Support Plan. These deviations will be approved or disapproved in the headquarters USAF review of this plan. Procedures developed in the logistic plan will incorporate applicable portions of the USAF Long Range Logistic Objectives to the greatest extent possible. Additional guidance is indicated in the attached bibliography.

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V. (UNCL) PROCUREMENT:

A. (Uncl) The GAM-63 is being procured on a slow build up concept with a very low production rate during the completion of the research and development program in order to incorporate required engineering and configuration changes prior to committing the missile to quantity production.

B. (Uncl) All X model GAM-63's will be used in the test programs and will not be available for modification to operational vehicles.

C. (Uncl) Procurement programs must assure that spares, ground support, test equipment and training equipment will be available to provide adequate support to the using agencies, and should be available for testing concurrently with the missile test program.

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VI. (SECRET) SECURITY: supply support of the GAM-63 weapon system will be accomplished through the most advanced methods possible in accordance with the long range logistic objectives.

A. (SECRET) Inventory Schedules

~~1. B-47/AM-63 squadrons will be supplied with thirty (30) AM-63's as operational stock.~~

1. X. B-47/AM-63 squadrons will be supplied with forty-five (45) AM-63's as operational stock.

B. (Unc) PROVISIONING

1. Provisioning of initial spares will be in accordance with AFM 65-80.

2. Quantity production of initial and operational items with short lead times will be delayed until later in the AM-63 weapon system production period to permit us to obtain as much design experience as possible. This type provisioning will result in more accurate determination of requirements, reduction of qualification and test stock items and a reduction of TCC. This is in accordance with the present Air Force policy of slow build-up of inventory to insure production rates. Provisioning of long lead time items will be initiated as early as possible in accordance with the projected delivery schedule.

3. It is recommended that a liaison committee be established to coordinate liaison with development and production organizations to test, ground handling and special support and maintenance work in order to permit systematic program and procedure development and to insure prompt delivery of this equipment and related facilities. It is essential to acquire the complete weapon system.

4. Determination of the cost category of each item will be accomplished at the earliest practicable time after production is authorized. Appropriate management controls will be established for each category.

C. (SECRET) Distribution:

1. During the pre-war period, GA-437 and supporting equipment will flow from the production line to operational units, with additional flow of repairable and repaired items following at about the same time.

2. Until such time as all theaters are fully equipped and operational, carefully scheduled and controlled flow, rather than distribution speed, to the prime requirement. Once theater bases, pipeline reduction is essential after full theaters are being relieved since assets in the pipeline after D-Day are expected to be largely inactive as far as the immediate post D-Day operations are concerned.

3. Procedures will be established to identify control and distribute the different cost category and high-value items.

D. (SECRET) Storage:

1. Since operational stocks will be allocated to and pre-positioned at operational units, and no post D-Day replacement stocks will be available until this operational program is completed, there will, at least initially, be no requirement for depot storage of GA-437s or major components thereof. This position will be reviewed as the JCS/AFS program progresses and supplemental instructions will be furnished if necessary.

2. Since operational units, with the exception of fixed readiness requirements and hence possess a level of operational readiness deficiency, the greatest part of the overall support effort will be at or near the operational unit. This will include storage provisions for spares, components, handling equipment, etc.

conversely, least upper factory storage will be near a function of the 200-
5-day re-charge cycle rather than the 100-day cycle.

II. 4. 2. 3. Reaction: consistent with the present for a definite
reaction time of 100 days, since full capacity is maintained, and
reaction time of 100 days will be employed for a second 100-day
period over all utilities.

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VII. (CONFIDENTIAL) TRANSPORTATION:

A. (Confidential) Packaging and Materials Handling:

1. Packaging of the GAM-63 Weapon System must be considered in light of transportation, storage and ground handling implications. The packaging of the GAM-63 weapon itself poses a different problem than does the packaging of components, assemblies, etc., of the remainder of the weapon system. These factors are discussed as follows:

a. Reference paragraph IV D and VII I above, operational missiles will be assigned directly from manufacturing facility to operational unit, at least for the period foreseen by this planning document. Base facilities will provide sufficient covered storage for operational stocks, with controlled environment where and if required. For these reasons, storage packaging of completely or partially assembled GAM-63's or major components thereof, will not be required.

b. No unusual storage requirements for the GAM-63 or the CAM-63 missile system can be now forecast, although it is possible that certain critical components may require selective packaging for storage within the operational unit. On the other hand, no storage package should be required for the airframe components, wings, etc. Specifically, all components, assemblies, sub-assemblies, etc., of this system will require individual analysis to determine what, if any, storage packaging will be required. Certain parallels and experienced workers should be available from AOC&G units, earlier missile squadrons and other types of communications units, to assist in accomplishing this analysis.

c. Since storage considerations appear to present no significant packaging problems, it follows that the mode(s) of transport and handling will largely

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determine packaging requirements. In this respect, several alternatives exist, varying from complete packaging to no package at all. The exact determination appears to be a function of both the method of transport from factory to unit and the method of transport and handling within the operational unit.

(1) Air transport for initial delivery of QAM-63's from the factory to the unit appears desirable and feasible for several reasons. First, initial delivery effort will be accomplished largely, if not completely, pre-D-Day. Second, probable production rates and total numbers involved indicate an acceptable airlift requirement extended over the entire production period; therefore, aircraft availability should not be a major problem. Third, and possibly most important, air transport will lower packaging costs and will provide technical advantages in terms of delivery of factory assembled missiles to the operational unit. Lastly, air transport need not necessarily be confined to commercial or even cargo-type aircraft. Consideration should be given to the external carry of QAM-63's on suitably converted R&D or second line aircraft. Also, factory pick-up by operational director carrier aircraft should be investigated.

(2) QAM-63's must be transported within the area of the delivery point and the operational unit. However, since this will most probably be the operational unit of the theater of operations area, it is expected that organizational handling and transport equipment will suffice. Transport and handling packaging for this operation should not pose a particular problem.

E. (CONFIDENTIAL) - Air Surface Transfer Station. In consonance with USAF Long Range Logistic objectives, direct airlift resupply from prime 21

depots and/or manufacturer to using units and activities is contemplated. For planning purposes, the fastest and most suitable transportation (air or surface), consistent with military requirements and over-all economy, will be provided for the logistic support of this weapon.

1. Air transportation. Consistent with the foregoing, airlift will be used for the movement of:

a. MAM-63's from factory(s) to aerial delivery point(s) nearest operational unit(s).

b. Missile spare parts, components, and supporting equipment from manufacturing facility or prime level to using activity.

c. Hi-value items and critical items as identified in T.O. 00-25-48.

d. Priority requisitioned items.

e. Critical reparable assets to overhaul activities.

2. Surface transportation. It is anticipated that surface transportation will be utilized for:

a. Movement within the area of the aerial delivery point and the squadron.

b. Movement of those items which are not air transportable and those items which are not critical and/or may be uneconomical to airlift.

c. Routine resupply.

d. Evacuation of noncritical reparables and excesses.

3. Airlift requirements.

a. Total tonnage and cargo requirements for airlift resupply

support of this weapon system to include all weapon components, spare parts, and accessory equipment, will be determined by Hq AMC for both peace and war. This action should be accomplished as early as possible in order that aircraft requirements can be properly projected.

3. Airlift requirements for unit movement will also be computed by AMC to the extent required by the A-63 Operational Plan(s).

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VIII. (UNCL) MAINTENANCE:

A. Maintenance support for the GAM-63 weapon system will conform, in general, to the policies, objectives, and responsibilities outlined in AFM 66-1, 66-17 and other directives pertinent to the function of maintenance. However, it must be borne in mind that the philosophy contained in current directives may not be applicable for the entire time period in which this weapon is to be employed. Special attention should be given Section IV, above, and the experience of special weapons organization as a framework for maintenance as well as other support planning.

B. Within the above framework, the following maintenance ground rules will apply:

1. (Uncl) Organizational Maintenance:

a. Organizational maintenance will be performed by the using organization within its capabilities.

b. To increase unit operational capability and to reduce forward work loads as much as practicable, full advantage will be taken of basic GAM-63 design philosophy which permits replacement of defective components and sub-assemblies in the field.

c. Careful screening of reparable components will be accomplished by the using organization to prevent needless return of these components to depot level for minor repairs which can be accomplished at the organizational level.

2. (Uncl) Field Maintenance:

a. Field maintenance facilities for the repair of components peculiar only to the GAM-63 weapon system will not be interposed between organizational level and depot level maintenance facilities; however, full

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advantage may be taken of already available field support facilities provided this workload can be absorbed within existing resources.

b. The Air Materiel Command, in coordination with the using command, will determine which repairs, normally accomplished at the field maintenance level, will be absorbed at the organizational and depot levels of maintenance.

3. (Uncl) Depot Maintenance:

a. The prime and supporting types of commercial activities as determined by AMC will accomplish such field and depot maintenance as Technical Order Compliance, modification, and repair beyond the scope and facilities of organizational activities. However, in location of such depot level activity will be carefully considered with reference to Section IV above.

b. The degree of use of contractor facilities and capabilities for the performance of depot maintenance, for both common and peculiar items of equipment and components, will be determined by the AMC, in accordance with AFR 6-17.

4. (Uncl) Except specifically interdicted as indicated above, common items of equipment and components will be maintained through established organizational, field and depot levels of maintenance.

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IA. (U) SUPPORT EQUIPMENT: No unusual quantitative or qualitative support equipment requirements can now be foreseen except those which have been generally referred to in the foregoing sections of this document.

Y. (HNDL) COMMUNICATIONS AND ELECTRONICS:

a. As can be deduced from an analysis of the weapon system and its techniques of employment, communications and electronics equipment will play an extremely important role. Although it can be assumed that a large percentage of this equipment will be standard Air Force or commercial items, used singly or in various combinations, some special items will also be required. Many of these will not be developed as part of the UD program. For this reason specific inquiries for information should be directed to the Weapon System Support Office.

b. The development of electronics and related systems, particular attention should be directed to the equipment coming into the system for the first time and equipment being developed and/or newly designated.

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