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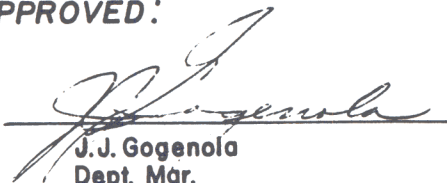
MASTER ACTIVITIES PLAN

WS107A-2
OPERATIONAL BASES

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Prepared By Headquarters
Test Planning Section

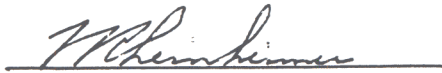
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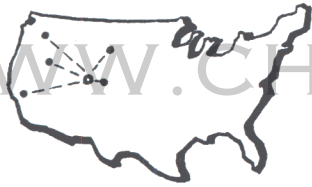
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Preface

The Site Manufacturing Master Activities Plan is provided for the purpose of guiding and directing all Site Manufacturing Field organizations in the essential tasks of WS107A-2 base activation.

It is the intent of the authors that this manual shall in no way be construed to be a part of the contract but rather to be a compilation of essential information taken from the referenced sources and compiled for the convenience and direction of all Operational Base Activation activities.

The plans, direction, and task analyses set forth in this document are based on optimum conditions. Deviations, corrections and special considerations which are necessary for individual squadrons of the Titan A Weapons System will be provided in subsequent maintenance revisions to the original document.

Each section of the manual is prefaced by an introduction to the data contained therein.



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References:

1. SR-59-101; Integrated Weapon System Activation Plan, Integrated Subsystem Test Plans and Procedures, TF-1 and T-1 thru T-5. (TMC) April 1961.
2. SR-59-102, Integrated Weapon System Activation Plan, Integrated Activation Exercise Test Plan and Procedure, TF-1 and T-1 thru T-5. (TMC) April 1961.
3. AFBM Exhibit 59-11, Contractual Responsibilities for activation of WS107A-2 Bases.
4. AFBM Exhibit 60-5, Weapon System 107A-2 Titan I, Functional Demonstration Specification. March 1961.
5. Titan Acceptance Plan I, TMC, 15 April 1961.
6. Facilities Test Plan for WS-107A-2 Operational Base Facilities, (DMJ&M) December 1960.
7. Site Manufacturing Installation Process Plans for Operational Bases, (TMC).
8. Site Test Operations Plan and Complex Test Working Plan, T-1, (TMC).
9. Integrated Weapon System Activation Plan, Base T-1, Unit Manning Document Personnel Phasing Schedule, SR-60-103 (Annex 3), TMC.
10. Titan I Operational Maintenance Policy, TMC, March 1961.
11. Site Manufacturing Directive #92, dated 3 April 1961 and Site Manufacturing Directive #92 revision 1, dated 28 April 1961.
12. Construction Surveillance Plan, Titan I, (TMC), 24 April 1961.
13. Acceptance and Turnover Procedure for WS 107A-2 Operational Weapon Systems, Martin Integration, T-1.



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DEFINITIONS & ABBREVIATIONS

ABC - Activation Base Camp.

ACCEPTANCE - The act of an authorized agent of the Government by which the Government agrees and acknowledges that weapon system equipment and services conform with contractual requirements.

ACO - Administrative Contracting Officer.

ACTIVATION - For the purpose of this document, activation is defined as the installation and checkout, formal demonstration of technical capability, acceptance for the Government, turnover to the using command and working off of incomplete tasks, as necessary to attain operational readiness of a missile site.

ADL - Arthur D. Little, Incorporated.
Subcontractor for the Propellant Loading System.

AFB - Air Force Base

AFS - Air Force Stocks

AFBMD - Air Force Ballistic Missile Division

Headquarters (ARDC) located in Inglewood, California, is vested with the executive authority for the development and test of ballistic missiles.

AFQC - Air Force Quality Control.

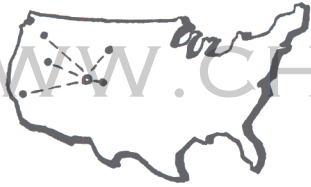
AFSC - Air Force Specialty Classification.

AGC - Aerojet - General Corporation

AMA - Air Material Area; also organization that operates any one of these areas under AMC.

AMC - Air Material Command

Headquarters, Wright Patterson AFB, Dayton, Ohio



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AMF - American Machine and Foundry Company. Associate Contractor for the Launcher and associated systems.

ARDC - Air Research and Development Command.

ASSEMBLY - A combination of parts or sub-assemblies that may be taken apart without destruction, but which has no application or use of its own even though essential for the completeness of a more complex item with which it is combined.

ASSOCIATE CONTRACTOR - A prime contractor to the Air Force for the development or production of sub-systems, equipments or components meeting specifications furnished or approved by the Air Force.

ATC - Air Training Command.

AVCO - Associate Contractor for the Re-Entry Vehicle. Sub-Contractor to TMC for the R/V GOE.

BASE SUPPORT SERVICES - Services provided by the host Base Combat Support Group in support of the sites (other than normal, direct weapon system support). Such services include road maintenance, and emergency assistance.

BMC - Ballistic Missile Center.

BMD - Ballistic Missile Division (formerly WDD), part of Headquarters ARDC.

BOD - Beneficial Occupancy Date. Date established when the contractor may accept the facility or portion thereof to start installation and activation phase.

CALIBRATION - A maintenance function, scheduled or unscheduled, which can be performed either at the equipment location or at the MAMS with the use of commercial or special test equipment. Briefly, a comparison between two instruments, one of which is a standard of known accuracy, to detect and to correlate or adjust any variation in the accuracy of the instrument being compared.



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CATEGORY "A" EQUIPMENT - Those independent items for which complete demonstration of function can be accomplished in accordance with engineering design drawings and/or Air Force approved end item specifications. These items are inspected and accepted at the factory and received after shipment to the site on DD Form 250, Material Inspection and Receiving Report.

CATEGORY "B" EQUIPMENT - Those items which are dependent and supplementary to other ground support items and cannot be completely demonstrated to the satisfaction of the Air Force until after installation and mating with other equipment. These items are inspected at the factory and released for shipment by the appropriate Government Inspector and accepted at the operational site or support base (using DD Form 250) after installation, checkout and formal demonstration has satisfactorily demonstrated performance as required by the applicable demonstration specification.

CCB - Configuration Control Board.

CCD - Configuration Change Directive.

CCN - Contract Change Notification.

CFE - Contractor Furnished Equipment.

CFP - Contractor Furnished Property.

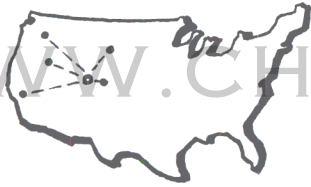
CL - Check List.

CMR - Contract Management Region.

COE - The Corps of Engineers (U. S. Army).

COG - Complex Operations Group.

CORRECTIVE MAINTENANCE - (Unscheduled Maintenance) - The maintenance performed when a malfunction is detected through programmed weapon system exercises, preventive maintenance activities, and normal usage of the equipment. Corrective maintenance consists of trouble-shooting to isolate malfunctions, and the subsequent restoration of the failed system to a serviceable condition through replacement, repair, realignment, and recalibration.



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COMPLEX - A general term intended to include all support facilities within a confined area which are vital to vehicle preflight checkout and launching.

COMPONENT - A combination of assemblies, sub-assemblies (unit), or parts which together may be functionally independent of, or an independent entity within, a complete operating system, but which provides a self-contained function necessary for proper sub-system, and/or system operation.

CRCC - Change Request Control Committee.

CTCI - Contractor Technical Compliance Inspection.

DEVIATION - The intentional relinquishment of a contractor's contractual requirement by the procuring agency.

DEPOT-LEVEL MAINTENANCE - Maintenance performed on Air Force material requiring major over-haul or complete rebuild of parts, assemblies, sub-assemblies and/or end items, including the manufacture of parts, modifications, testing and reclamation as required. Depot-level maintenance serves to support organizational and field maintenance by providing technical assistance and performing that maintenance beyond the using command's responsibility or capability.

DMJM - Daniels, Mann, Johnson and Mendenhal.

D/MM-SBAMA - Director of Materiel Management - San Bernadino Air Materiel Area

ECN - Engineering Change Notice.

ECO - Engineering Change Order.

ECP - Engineering Change Proposal.

EQUIPMENT OR ITEM - General terms referring to any sub-division of the weapon system.

ETO - Engineering Test Order.

FCA - Field Change Authorization.

FCR - Field Change Request.



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FIC - Field Installation Change.

FIELD MAINTENANCE - Field maintenance is that level of maintenance which provides capabilities above and beyond organizational maintenance because of time, equipment, or facility limitations. Field maintenance is normally performed at the MAMS but may be performed at the launch complex by MAMS personnel. The extent of field maintenance will be commensurate with authorized personnel and equipment, and as defined by agreement between the using command and the Air Material Command and delineated in the dash eighteen (-18) series of technical orders. (T.O.'s OO-20E-1 and OO-25-140 and AFR 66-1).

FSE - Field Support Equipment.

FSSD - Field Service and Support Division (of TMC).

FUNCTIONAL DEMONSTRATION - The performance of a task or tasks by the integrating and/or associate contractors for the purpose of substantiating that the equipment meets functional contractual requirements.

GFAE - Government Furnished Airborne Equipment. Equipment utilized by the missile, such as the guidance system, radar, etc.

GFE - Government Furnished Equipment - Items of equipment furnished the contractor(s) by a military or government organization. Shipped on a DD 1149 Form.

GFP - Government Furnished Property.

GOE - Ground Operating Equipment. That ground equipment which is peculiar to the Weapon System and which must be operated in direct support of the missile.

GSE - Ground Support Equipment. That ground equipment not required for the direct support of the weapon system to accomplish an actual firing. This equipment includes all ground hardware which is required to inspect, test, adjust, calibrate, appriase, gauge, repair, overhaul, transport, safeguard, actuate, or perform a function in support of the weapon system.



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GSTP - Ground System Test Procedure - Detailed procedure used to verify the functional capability of GOE subsystems and systems.

I&C - Installation and Checkout. The assembling, installation, and/or testing of assemblies, components, and/or equipment **essential** to making a facility of performing the function or function for **which** it was programmed, including an integrated checkout.

INTEGRATING CONTRACTOR - The contractor assigned **responsibility** for the overall scheduling and system checkout of associate **contractor** activities and equipment, and for furnishing of specified support **services** which are common to several contractors.

JOD - Joint Occupancy Date.

MAMS - Missile Assembly and Maintenance Shop. The **MAMS** is an independent facility that includes a propulsion shop, hydropneumatic shop, electronics and electrical shop, machine shop (T-1 only), **LOX** cleaning facilities, quality control laboratory, and storage for **components**, spare parts and supplies for the weapon system.

MEL - Material Equipment List.

MODULE - A combination of assemblies, sub-assemblies (**units**), or parts contained within one package or so arranged that together **they** are common to one mounting, which provides a function or functions to the sub-systems and/or systems in which they operate.

OB - Operation Base.

ORGANIZATIONAL MAINTENANCE - That preventive and corrective maintenance which can be performed at the launch complexes without requiring support from the SMA. Organizational maintenance normally consists of **assembly**, pre-launch or pre-flight, post launch, daily periodic, and storage **inspections** of missiles and related GSE facilities, servicing, preventive maintenance, malfunction isolation, removal and replacement and/or repair of malfunctioning components, test and system verification.



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PART - The last sub-division of a system; an individual piece, having an inherent functional capability but unable to function without the interaction of other parts or forces, and that cannot be taken apart without destruction.

PREVENTIVE MAINTENANCE OR SCHEDULED MAINTENANCE - The care and servicing accomplished on a prescribed time basis for the purpose of maintaining equipment and facilities in a satisfactory operating condition and decreasing the probability of a malfunction. Preventive maintenance is performed on a calendar or periodic basis and workload generated can be predicted.

QA - Quality Assurance.

QC - Quality Control.

RFA - Request for Facility Alteration.

RIME - Radio Inertial Monitoring Equipment.

RP - Real Property. The fixed capital assets of the Air Force consisting of lands and interests, therein, such as leases, permits, easements, licenses or rights-of-way, ground and structural facilities, utility systems, and shelters. Real property also includes those items of non-expendible equipment and property which are attached to, or installed in, real property.

RPIE - Real Property Installed Equipment. Items of equipment attached to or installed in "Real Property." Direct support RPIE are those items of equipment, systems or sub-systems that are essential to the launching and guidance of a missile, the absence of which would preclude the Weapon System performing its assigned mission. UAL items are not included under this definition.

RRU - Remington Rand Univac, Division of Sperry Rand Corporation. Associate Contractor jointly responsible with WECO for the guidance system.

R/V - Re-Entry Vehicle.

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SAC - Strategic Air Command.

SATAF - Site Activation Task Force.

SBAMA - San Bernardino Air Material Area.

SC - Sequence Chart.

S/C - Stromberg Carlson a Division of General Dynamics, responsible for the OB communications system.

SITE - Denotes an area in which WS107A-2 complexes and their support activities are located.

SM-68 - Operational WS107A-2 Missile (Titan).

SMA - Squadron Maintenance Area. Denotes an area occupied by a non-hardened set of facilities normally located on an existing Department of Defense (DOD) Base. The SMA includes the following facilities: Missile Assembly Maintenance Shop (MAMS), Surveillance and Inspection (S & I) Building, Warehouse Building, Storage Magazines, and Propellant Storage Area and Generation Plant.

SMD - Site Manufacturing Division (of TMC).
Site Manufacturing Directive.

S & I - Surveillance and Inspection Facility (Re-Entry Vehicle).

SYSTEM - Fundamental division of a configuration which, during use of the weapon system, performs a complete and independent operation (Flight Controls, propulsion, pressurization, etc.).

SUB-ASSEMBLY (UNIT) - A combination of parts comprising a definable entity of an assembly or component and possessing a functional potential essential to the proper operation of that assembly or component.

TAT - Technical Approval Team.

TCTO - Time Compliance Technical Order.

TMC FO - The Martin Company, Field Office.



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TO - Technical Manual (formerly Technical Order).

TURNOVER - The process of transferring accountability and/or custodial responsibility between the Contractor and the Air Force.

TWG - Test Working Group.

UAL - Unit Authorization List. A list of all items authorized for support of an Air Force Unit.

VALIDATION - The process by which technical data is checked against equipment to confirm accuracy and sufficiency.

VERIFICATIONS - The official AMC action whereby technical data is accepted as an official Air Force technical publication.

WA - Work Authorization.

WCMR - Western Contracts Management Region.

WECO - Western Electric Company, Associate Contractor, jointly responsible with RRU for the guidance system.