DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE GLOBAL STRIKE COMMAND

AFGSCI99-102_AFGSCGM2016-02

19 July 2016

MEMORANDUM FOR ALL HQ AFGSC AND AFGSC UNITS

FROM: HQ AFGSC/A3
245 Davis Avenue East, Suite 207
Barksdale AFB LA 71110

SUBJECT: Air Force Global Strike Command (AFGSC) Guidance Memorandum (GM) to AFGSCI 99-102, *Intercontinental Ballistic Missile (ICBM) Operational Test and Evaluation (OT&E)*

1. By Order of the Commander, Air Force Global Strike Command, this AFGSC GM immediately implements changes to AFGSCI 99-102 *Intercontinental Ballistic Missile (ICBM) Operational Test and Evaluation (OT&E), dated 2 March 2011, Certified Current 4 September 2012*. Compliance with this memorandum is mandatory. To the extent its directions are inconsistent with other Air Force Global Strike Command Publications, the information herein prevails IAW AFI 33-360, *Publications and Forms Management*. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See AFI 33-360, *Publications and Forms Management*, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the Publication OPR for non-tiered compliance items.

2. In advance of the rewrite of AFGSCI 99-102, this memorandum, which is effective immediately, provides guidance on the AFGSC Operations Orders and Fragmentation Orders, Simulated Electronic Launch-Minuteman (SELM) Anomaly Procedures, and integrates changes from AFGSCI99-102_AFGSCGM2016-01.

3. AFGSCI 99-102 is amended to reflect the following changes:

Change all references to "Test Execution Order (TEO)" to "Test Execution Instructions (TEI)"
Change all references to "OPLAN 8010" to "OPLAN 801X"
Change the following office symbols:
"HQ AFGSC/A3I" to "HQ AFGSC/A3T"
"HQ AFGSC/A3IT" to "HQ AFGSC/A3TT"
"HQ AFGSC/A3IN" to "HQ AFGSC/A3TT"
"HQ AFGSC/A3IA" to "HQ AFGSC/A35Z"
"AFNWC/NWI" to "AFNWC/NI"
"576 FLTS/OGV" to "576 FLTS/DOV"
"576 FLTS/TEMA" to "576 FLTS/DORA"
"576 FLTS/TE" to "576 FLTS/DO"
"576 FLTS/TM" to "576 FLTS/MOO"

"576 FLTS/LGQ" to "576 FLTS/MXQ"
"576 FLTS/TMOO" to "576 FLTS/MMXOJ"
"576 FLTS/TMRI" to "576 FLTS/MMXRI"
"576 FLTS/TMOS" to "576 FLTS/MMXOS"
"625 STOS/OSK" to "625 STOS/DOM"
"625 STOS/OSO" to "625 STOS/DOO"
"798 MUMG Det 1" or "798 MUMG Det 1/CC" to "576 FLTS/MMXW"

1.5.1.3. (Modified) AFGSC will identify all ICBM Operational Tests utilizing assets external to the 576 FLTS in the AFGSC Operations Order (OPORD) or its Fragmentation Orders (FRAGORD). **(T-1).** 576 FLTS/Standardization and Evaluation (DOV) will prepare a Test Execution Instruction (TEI) containing specific requirements that each participating unit must accomplish to ensure mission success. Amendments to the TEI will be published and distributed to participating units. **(T-2).**

1.12.3.10. (Added) Immediately notify AFGSC/A3T and AFGSC/A4B of any anomalies that occur during test execution. **(T-2).**

1.12.3.11. (Added) Identify all ICBM Operational Tests utilizing assets external to the 576 FLTS in the AFGSC OPORD or its FRAGORDs. **(T-1).**

1.12.6.8. (Modified) Develop and distribute a TEI for each operational test identified in the AFGSC OPORD or FRAGORD. This document will contain all mission specific requirements each participating unit must accomplish to ensure mission success. Amendments to the TEI will be published and distributed to participating units as required. **(T-2).**

1.12.6.9.1. (Modified) Submit Engineering Technical Assistance Requests (ETAR) for all technical issues on weapon system components or support equipment common to operational wings that are not identified in a FRAGORD. **(T-2).** Requests for waivers to T.O. policy will also be submitted using the ETAR system. **(T-2).**

1.12.6.9.2. (Modified) Submit Special Operational Requests (SORs) for all components identified in the FRAGO and provided by the Missile Wing or Department of Energy. Submit SORs IAW the following guidance:

1.12.6.9.2.1. (Added) For components that meet specific T.O. rejection criteria submit Component Replacement Requests (CRR) sanctioned by the 576 FLTS/CC or designated representative for engineering assessment and replace/don't replace recommendation. HQ AFGSC/A3 or designated representative will approve or disapprove all modifications to mission configuration. **(T-2).**

1.12.6.9.2.2. (Added) For components that do not meet specific T.O. rejection criteria, submit a Request for Guidance (RFG) sanctioned by the 576 FLTS/CC or designated representative for engineering assessment. If engineering assessment determines the component should be replaced to ensure a successful test, do not submit an additional CRR; the engineering guidance in the RFG will suffice. HQ AFGSC/A3 or designated representative will approve or disapprove all modifications to mission configuration. The 576 FLTS/CC or designated representative will approve or disapprove implementation of all other RFG responses. **(T-2).**

1.12.6.9.3. (Modified) Submit Special Test Requests (STRs) for all equipment that supports telemetry, data acquisition or range safety requirements. Submit STRs IAW the following guidance:

1.12.6.9.3.1. (Added) For components that meet specific T.O. rejection criteria submit CRRs sanctioned by the 576 FLTS/CC or designated representative for engineering assessment and replace/don't replace recommendation. The 576 FLTS/CC or designated representative will approve or disapprove implementation of all STRs. **(T-2).**

1.12.6.9.3.2. (Added) For components that do not meet specific T.O. rejection criteria, submit a Request for Guidance (RFG) sanctioned by the 576 FLTS/CC or designated representative for engineering assessment. If engineering assessment determines the component should be replaced to ensure a successful test, do not submit an additional CRR; the engineering guidance in the RFG will suffice. The 576 FLTS/CC or designated representative will approve or disapprove implementation of all STRs. **(T-2).**

1.12.6.9.4. (Deleted)

1.12.6.9.5. (Deleted)

1.12.6.9.6. (Deleted)

1.12.6.9.7. (Deleted)

1.12.6.9.8. (Modified) In order to keep critical ICBM OT&E processing on schedule, ETARs, SORs and STRs must be processed as quickly as possible without compromising the coordination process.

1.12.11. (Added) HQ AFGSC/A4B will:

1.12.11.1. (Added) Provide a designated maintenance representative for all SELM, FDE, and HSEP programs. **(T-2).**

2.2.3.8. (Added) Determine the routing and distribution for all special requests. **(T-2).**

2.2.13.1. (Modified) Review and track until closure, all Special Requests for applicable actions regarding the deployed force. **(T-2).** Consider fleet-wide inspections, technical data changes, waivers, etc. Interface with the AFNWC/NI as appropriate to accomplish any and all actions deemed necessary.

3.2.1.3. (Deleted)

3.2.1.6. (Modified) Have JFCC/GS-515 provide the targeting support for SELM sorties, if required.

3.2.3.2. (Modified) Develop and implement a standardized SELM preparation/recovery plan containing day-by-day procedures essential to the successful preparation for and recovery from SELM tests. **(T-1).**

3.2.3.2.1. (Added) Provide this plan to the Missile Wing upon receipt of the GIANT PACE Key Personnel Message. **(T-1).**

3.2.3.2.2. (Added) Within 60 days of Squadron Restoration, 20 AF will provide HQ AFGSC/A3TT, HQ AFGSC/A4B, the 576 FLTS and missile wing SELM key personnel with the opportunity to review and modify the preparation/recovery plan. **(T-1).** Disposition of comments will be noted on an adjudicated comments resolution matrix which will be provided to all stakeholders upon change implementation. **(T-1).**

3.2.3.3. (Deleted)

3.2.4.8. (Modified) Provide MIF for airborne test day of each SELM test. The MIF will have capabilities to conduct real-time analysis and record 1 MHz samples, test tone frequencies of 1024 Hz, and a range of 266.05 MHz to 382.375 MHz for UHF recordings. The MIF and technicians to operate it will arrive at the test unit at least 24 hours prior to airborne test.

3.2.5.3.12. (Added) Ensure 20 AF/A3 and 20 AF/A4 are notified when an anomaly occurs and keep them informed of the investigation's progression. **(T-2).**

3.2.5.3.13. (Added) Ensure the Missile Wing Plans and Scheduling office coordinates with 625 STOS/DOM to extend sortie F-Cat status if additional time is needed for anomaly investigation and for sortie disposition when anomaly investigation is terminated. **(T-2).**

3.2.5.3.14. (Added) Convene the Anomaly/Failure Investigation termination meeting or teleconference. **(T-2).**

3.2.6.7. (Added) Provide Preparatory Launch Command-A (PLC-As) for use during SELM tests.

3.3.3. (Modified) The TSM forms a SELM Working Group (typically MW/CC/CV, OG/CC/CD, MXG/CC/CD, SQ/CC, OSK, OSB, DOV, Safety and any other agencies deemed necessary) and begins planning for SELM activities to include: SELM posture/Operational Plan (OPLAN) deposture, personnel training and development of lesson plans, procurement of supplies, and receipt of required SELM test equipment from — "SELECT" in the MTU.

3.3.16.1. (Modified) Unless jointly waived by the MW/CC and 576 FLTS/CC or their designated representatives, immediately implement an anomaly/failure analysis for failure to achieve test objectives due to hardware/software anomalies, for countdown aborts or for significant anomalies occurring during Part III (SELM Launch Demonstration). The MW/CC and 576 FLTS/CC may also implement an anomaly/failure analysis for significant anomalies occurring during Parts I, II and IV. SELM anomalies and the details of the investigation are classified IAW the ICBM SCG. If the MW/CC and 576 FLTS/CC cannot agree on implementing anomaly/failure analysis, AFGSC/A3T will make the determination. **(T-2).**

3.3.16.3. (Modified) The MW/CC and 576 FLTS/CC or their designated representatives share joint responsibility for the investigation of any test objective failure, countdown abort, or significant anomaly. Assistance from the on-site AFNWC/NIET "SELECT" is mandatory for investigation of Part III failures/anomalies. If required, request "SELECT" assistance for Part I, II or IV anomalies. **(T-2).**

3.3.16.5. (Deleted)

3.3.16.8. (Modified) Do not enter test LFs evacuated for safety reasons until approval for safe entry is declared according to provisions of the SELM T.O.s. **(T-1).**

3.3.16.9. (Modified) Upon notification that an anomaly was not caused by SELM equipment or test procedures accomplish the following:

3.3.16.9.1. (Added) Impound the site for detailed investigation. The TET Team Chief or MW/CC designated representative will restrict entry to the LF to personnel specifically assigned, approved, and trained to conduct failure analysis. **(T-2).**

3.3.16.9.2. (Added) During anomaly analysis do not alter site configuration unless mandated by HHQ guidance, Weapon System Safety Rules or T.O.s. **(T-1).**

3.3.16.9.3. (Added) Any components identified as a possible cause of an anomaly will be tested on site IAW applicable T.O. guidance, "SELECT" approved procedures or removed from site for engineering analyses. **(T-1).**

3.3.16.9.4. (Added) Components removed from an anomaly site will be segregated from operational weapon system components until final disposition instructions are received from AFNWC via the ETAR process. **(T-1).** Ensure no classified information is entered into the ETAR system.

3.3.16.9.5. (Added) Disposition of any component identified as a possible cause of an anomaly will be determined by AFNWC via the ETAR process. **(T-1).** Ensure no classified information is entered into the ETAR system.

3.3.16.11. (Added) Once the AAT and/or AFNWC/NI inform the TSM that they have completed their anomaly investigations, the TSM will convene an Anomaly/Failure Investigation termination meeting or teleconference. **(T-2).** The purpose of this meeting is to ensure all stakeholders agree that the anomalous condition(s) are resolved, no additional investigation is needed and that the sortie(s) should be returned to its OPLAN 801X commitment. Attendees will, at the minimum, consist of the AAT, AFGSC/A3TT, AFGSC/A4B and 20 AF/A3/A4. The MW/CC and 576 FLTS/CC jointly retain final decision authority to release sorties from an anomaly investigation. **(T-2).**

3.3.16.12. (Added) The Anomaly/Failure Investigation termination meeting will cover the following topics as well as any others deemed pertinent by the MW/CC or 576 FLTS/CC. **(T-2).**

3.3.16.12.1. (Added) Possible root causes identified by the AAT.

3.3.16.12.2. (Added) Actions taken by the AAT to isolate the anomaly.

3.3.16.12.3. (Added) Results of the AAT investigations.

3.3.16.12.4. (Added) Actions required to return the site to an operational configuration.

3.3.16.12.5. (Added) Timeline for any associated engineering analysis.

3.3.16.12.6. (Added) Poll of stakeholder's concurrence to return the sortie(s) to OPLAN 801X alert.

3.4.1.3. (Deleted)

Terms, Test Execution Instructions (Modified) Test specific tasking notification issued by 576 FLTS under the authority of the AFGSC Operations Order or AFGSC Fragmentation Order. Each TEI contains mission specific requirements and responsibilities, which must be accomplished to ensure mission success.

Attachment 9 (Modified)

SELM KEY EVENT FLOW

ACTIVITY	AGENCY	SELM
Publish TEI	576 FLTS	T-150 days
Appoint SELM TSM and other Key Personnel	MW	NLT 5 days after TEI receipt
Provide SELM preparation/recovery plan to MW	20 AF	Upon receipt of Key Personnel Message
Review T.O.s and submit changes	MW	T-13 weeks
Coordinate test activities and support with AFNWC/NI, 85 EIS and any additional support agencies.	576 FLTS	T-12 weeks
Coordinate AFNWC/NI, 85 EIS and any additional support agencies' support and access requirements with TSM.	576 FLTS	T-10 weeks
AFNWC/NI MTU on station	AFNWC/NI	T-8 weeks
Pretest Briefing	576 FLTS	T-8 weeks
Lesson plans to 576 FLTS	MW	T-8 weeks
TM/TSM Submit SELM Posture and OPLAN 801X Reposture Schedules to 576 FLTS	MW	T-6 weeks
Publish approved TP supplement	576 FLTS	T-30 days prior to TRRB
TM/TC on station	576 FLTS	T-4 weeks
Conduct ART	MW	T-4 weeks
Begin SELM Posture	MW	No earlier than T-19 days
Distribute Final TSD	576 FLTS	T-2 weeks
TMA on station	576 FLTS	T-1 week
SELM Alert	MW	Friday before Test Week
Last Line Isolation (T-0)	576 FLTS	Friday before Test Week
AFNWC/NI UHF monitor equipment arrives at MW	AFNWC/NI	1 Day Prior to Test Start
Test Readiness Review Board (TRRB)	MW and HQ AFGSC/A3	1 Day Prior to Test Start
Airborne Test Day	576 FLTS	Tuesday of Test Week
Ground Test Day	576 FLTS	Wednesday of Test Week
Backup Test Day	576 FLTS	Thursday of Test Week
Squadron Restoration	576 FLTS	Immediately following test completion
OPLAN 801X Alert	MW	Typically 19 days after Squadron Restoration
T.O. review and submit changes	MW	NLT 5 weeks after Squadron Restoration

Provide agencies identified in paragraph 3.2.3.2.2. an opportunity to review and modify SELM preparation/recovery plan	20 AF	Within 60 days of Squadron Restoration
Submit Performance Report	576 FLTS	NLT 60 days from receipt of last data item
Submit SELM Expense Report	MW	NLT 90 days from OPLAN 801X Alert

4. The guidance in this memorandum becomes void after one year has elapsed from the date of this memorandum, or upon release of an AFGSC publication incorporating the guidance, whichever is earlier.

5. Direct questions to Colonel Russell J. Hart, AFGSC/A3T, DSN: 781-2859.

FERDINAND B. STOSS III
Brigadier General, USAF
Director of Operations

BY ORDER OF THE COMMANDER AIR FORCE GLOBAL STRIKE COMMAND

AIR FORCE GLOBAL STRIKE COMMAND INSTRUCTION 99-102

2 MARCH 2011
Certified Current, 4 September 2012
Test and Evaluation

INTERCONTINENTAL BALLISTIC MISSILE (ICBM) OPERATIONAL TEST AND EVALUATION (OT&E)

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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Certified by: HQ AFGSC/A3I (Col Michael Nahorniak)
Pages: 112

This instruction implements U.S. Strategic Command (USSTRATCOM) Instruction SI 526-1, Guidelines for Nuclear Weapon System Operational Testing and Reporting, and Air Force Policy Directive (AFPD) 99-1, Test and Evaluation Process, by establishing Air Force Global Strike Command (AFGSC) requirements and guidance to conduct ICBM OT&E. It also implements guidance outlined in Air Force Instruction (AFI) 99-103, Capabilities-Based Test and Evaluation, and AFI 99103_AFGSC SUP.

This instruction applies to Headquarters (HQ) AFGSC, 20th Air Force, and subordinate units conducting or supporting ICBM OT&E. It does not apply to the Air Force Reserve Command or Air National Guard units. ICBM OT&E includes operational test launches (OTL), simulated electronic launches - Minuteman (SELM), software operational tests (SOT), weapon system tests (WST), and other ICBM operational testing.

Organizations may supplement this instruction. Coordination with Headquarters Air Force Global Strike Command ICBM Test and Analysis Branch (HQ AFGSC/A3IT) is required prior to the finalization of unit supplements. The reporting requirements in this publication are exempt from licensing in accordance with AFI 33-324, The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF IMT 847, Recommendation for Change of Publication; route AF IMT 847s from the field through the appropriate functional's chain of command.

This instruction requires maintaining or collecting information subject to the Privacy Act of 1974, authorized by Title 10 U.S.C., Section 8013 and EO 9397. System of records notice F031 AF SP M, Personnel Security Access Records, applies. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, Management of Records, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located **https://www.my.af.mil/gcss-af61a/afrims/afrims**/. See Attachment 1 for a glossary of references and supporting information.

SUMMARY OF CHANGES

This document is substantially revised and must be completely reviewed.

Chapter 1

OVERVIEW

1.1. General. AFGSC conducts the ICBM OT&E program to provide accuracy and reliability planning factors to the Commander, United States Strategic Command (CDRUSSTRATCOM), and evaluate the operational effectiveness and suitability of system modifications or upgrades prior to initial fielding. ICBM OT&E includes OTL, SELM, SOT, WST and other operational testing.

1.1.1. OTLs, designated GLORY TRIP, consist of flight tests of operational ICBMs in a peacetime environment in as near to the operational flight environment as possible from first stage ignition to impact.

1.1.2. SELMs, designated GIANT PACE, provide the most complete test of the deployed ICBM force from crew commit actions through issuance of the Minuteman (MM) first stage ignition signal.

1.1.3. SOTs consist of testing the Console Operating Program (COP) and Baseline Updates of the Higher Authority Communications/Rapid Message Processing Element (HAC/RMPE). AFGSC tests the COP and HAC/RMPE operational software to ensure each software change meets USSTRATCOM and AFGSC needs.

1.1.4. WST verifies overall alert readiness of the deployed ICBM weapon system, independent of the SELM test environment, through the means of two tests:

1.1.4.1. Monthly, operational unit-initiated weapon system tests designated OLYMPIC PLAY.

1.1.4.2. Bi-weekly, Ultra High Frequency (UHF) radio tests, designated GIANT BALL, performed by the Air Launch Control System (ALCS) on the alert force Launch Facilities (LFs)/Launch Control Centers (LCC).

1.1.5. Other tests consist of testing modifications or upgrades to the operational weapon system and/or support equipment, to include the Launch Facility (LF), Missile Alert Facility (MAF) and associated support equipment.

1.2. Objectives:

1.2.1. OTL objectives. Basic objectives of the OTL program are to establish accuracy and reliability planning factors under representative operational test conditions, detect trends or changes in weapon system accuracy and reliability, identify areas for weapon system modification/improvement, and verify operational effectiveness and suitability. Weapon system accuracy, reliability, and performance are primary test objectives on every OTL to include an assessment of Mk 12A and Mk 21 re-entry vehicles (RV) to meet Department of Energy (DOE) and AFGSC requirements. OTL task force (TF) objectives will include an assessment of technical data, procedures and adequacy of training in an operationally realistic environment from stockpile to target. Aging surveillance objectives will be considered at the request of AFNWC ICBM Systems Division (AFNWC/NWI). Special test objectives such as targeting at extended ranges or testing RV modifications will be accomplished as required. ALCS will be tested at a minimum of once per fiscal year during

an OTL. To achieve these basic objectives, individual mission test objectives are identified as category (Cat) I, II or III.

1.2.1.1. Cat I. Achievement of Cat I objectives is mandatory for a successful program, mission or test. Not achieving a category I objective would significantly impact program schedules, costs and verification of system performance. AFGSC/A3I or designated representative will have Cat I test objective waiver authority. If an associated operation is granted Cat I status, AFGSC/A3I or designated representative will have waiver authority for that associated operation.

1.2.1.2. Cat II. Achievement of Cat II objectives is required to make the program, mission, or test a complete success. These objectives may be waived due to performance, cost, time, or other constraints. A launch will not be rescheduled to meet a Cat II objective. A launch countdown may be held to achieve a Cat II objective unless the hold would adversely affect achievement of a Cat I objective. Commander, 576th Flight Test Squadron (576 FLTS/CC) or designated representative will have waiver authority for Cat II test objectives. If an associated operation is granted category II status, 576 FLTS/CC or designated representative will have waiver authority for that associated operation.

1.2.1.3. Cat III. Achievement of a Cat III objective is desired for design or environmental research, associated operations or a supporting engineering effort. Generally, these objectives would be beneficial to achieve if support can be provided within existing support agency capabilities. A launch countdown will not be rescheduled but may be held at the discretion of the Mission Director (MD) to achieve a Cat III OTL objective. The launch countdown will not be held if it adversely affects achievement of Cat I or II objectives. The MD will have waiver authority for Cat III objectives.

1.2.2. SELM Objectives. The basic SELM objective is to assess reliability of ICBM weapon systems (including the ALCS) in their deployed environment. To achieve this basic objective, individual test objectives are identified as Cat I, Cat II, or special.

1.2.2.1. Cat I. Achievement of Cat I objectives are mandatory for a successful program or test.

1.2.2.1.1. Cat I objectives include:

1.2.2.1.1.1. Verifying the capability of the LCC and the ALCS to process required launch commands.

1.2.2.1.1.2. Verifying the capability of the LF ground system electronics and missile guidance ground program systems to process the launch sequence during the terminal countdown sequence.

1.2.2.1.1.3. Providing reliability data for the ICBM weapon system to Headquarters Air Force Global Strike Command Force Employment Branch (HQ AFGSC/A3IN) and AFNWC/NWI.

1.2.2.1.2. AFGSC/A3I or designated representative will have waiver authority for Cat I objectives.

1.2.2.2. Cat II. Achievement of Cat II objectives are required to make the program or test a complete success. These objectives are developed by 576 FLTS and are coordinated with HQ AFGSC/A3IT and AFNWC/NWIEI “System Engineering Level

Evaluation Correction Team (SELECT)" and approved as part of the Test Plan. The goal of Cat II objectives is to exercise the deployed weapon system to its design limits.

1.2.2.2.1. These objectives may be waived due to performance, cost, time or other constraints. 576 FLTS/CC or designated representative will have waiver authority for Cat II objectives.

1.2.2.3. Special. Achievement of special objectives can either be Cat I or Cat II for a successful program or test. Special objectives are test specific. AFGSC/A3I or designated representative in consultation with HQ AFGSC/A3IT/A3IN/Current Operations Branch (A3IA) and/or AFNWC/NWIEI "SELECT" will have waiver authority for special objectives.

1.2.3. SOT Objectives. The purpose of SOT is to validate each new revision of operational software and proper system operation within the Minuteman III command, control and communication (C3) system and to evaluate operational effectiveness and suitability of the software. As defined, SOT is only used for changes to the HAC/RMPE and COP software. Other types of software testing are addressed in paragraph 1.2.5. and Chapter 6 of this instruction.

1.2.3.1. SOTs are conducted in as realistic an operational environment as possible. This focus on operational realism in both planning and execution is important to ensure all deficiencies are identified before the software is fielded. SOT provides an independent evaluation of modifications to the software and supporting systems. SOTs demonstrate and assess system software improvements, modifications and performance and ensure functionality is not adversely affected. To ensure adequate evaluation, operational testing is planned using operationally representative test assets and facilities at Vandenberg AFB, CA (VAFB) and/or Hill AFB, UT.

1.2.4. WST Objectives. WSTs verify the readiness of the ICBM alert force and provide data for estimating launch reliability throughout the lifecycle of the deployed weapon system.

1.2.4.1. OLYMPIC PLAY Testing. OLYMPIC PLAY tests contribute to both the development of planning factors and AFNWC/NWI's Weapon System Aging Surveillance Program. OLYMPIC PLAY allows AFGSC to test the ICBM weapon system in its deployed environment without breaking operational configuration to install test equipment or instrumentation.

1.2.5. Objectives of other operational testing. Other operational testing is used to provide an independent evaluation of a system, software and/or component in accordance with AFI 99-103, to measure operational effectiveness and suitability prior to production or fielding. The system, software and/or component under test will be referred to as "system under test" (SUT) from this point forward. Reporting supports production or operational fielding decisions for each SUT.

1.2.5.1. Other operational testing will be conducted under as operationally realistic conditions as possible. This may at times require testing to be performed at facilities outside VAFB or Hill AFB, UT. In such cases, focus will be on conducting testing in as realistic operational conditions as possible for the SUT.

1.2.5.2. Organizations requiring ICBM OT&E will ensure testers are involved early in the acquisition process in accordance with AFI 99-103, to include requirements-development, Integrated Test Teams and developmental test and evaluation. This will

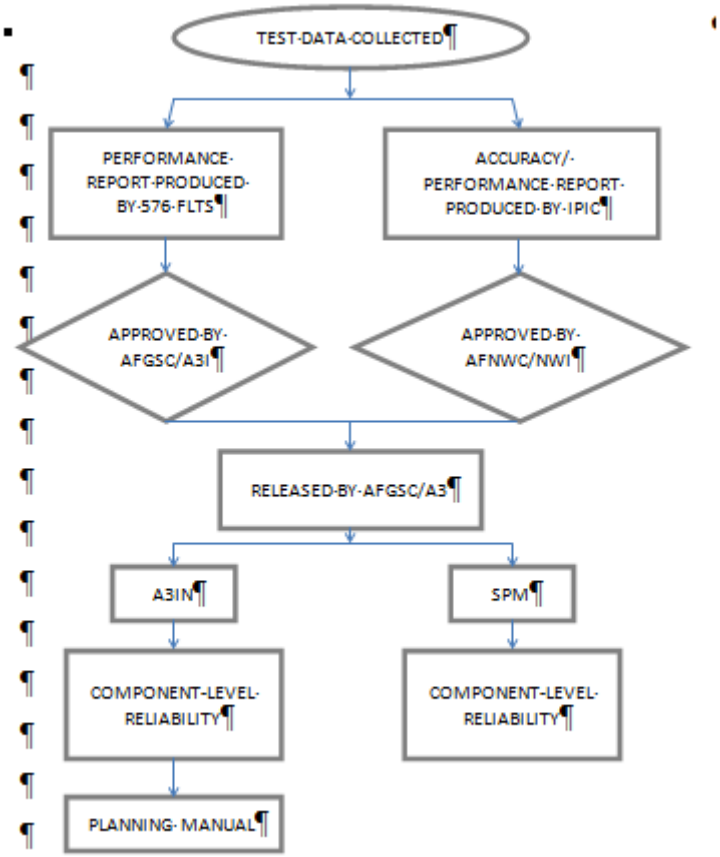
allow a better understanding of the SUT's operation and help to ensure OT&E is projected, funded and can be conducted with minimal impact to the projected fielding schedule.

1.3. Guidance. Operational realism is second only to safety when conducting ICBM OT&E. Weapon systems tested as FDE must be, as much as possible, representative of the deployed force and employed environment. This concept governs configuration of facilities, selection of missiles, makeup and deployment of TFs, and use of technical data and flight profile/targeting options. For an ICBM OTL and SELM, the selected missile(s) should normally be on emergency war order (EWO) alert to be eligible for designation as a test asset. Selected equipment will be flown "as is" unless damaged as a result of removal and emplacement or if a problem may jeopardize the flight.

1.4. Security. In addition to safety and operational realism, security is an important consideration for all ICBM OT&E. Refer to the ICBM Security Classification/Declassification Guide (SCG) for further information regarding the classification of ICBM OT&E results.

1.5. ICBM OT&E Process. The ICBM OT&E process consists of three parts: test planning, test execution and test reporting. All test reports (interim and final) will be handled at a minimum as Unclassified//For Official Use Only. Figure 1.1. Illustrates the performance report preparation process.

Figure 1.1. Performance Report Preparation Process.



1.5.1. Effective Test Program. Requirements for an effective test program include clearly defined test objectives, defining elements to be measured and the means by which they are

measured, developing a means of comparing test results against established requirements, standards and goals, and accurately reporting to the customer(s). To fulfill these requirements, every test conducted under ICBM OT&E will include the following:

1.5.1.1. Based on customer requirements, HQ AFGSC/A3IT will prepare a test order (TO) in accordance with paragraph 1.13.3.4. TOs will be valid for 2 years.

1.5.1.2. For all AFGSC-conducted ICBM OT&E, 576 FLTS will be the operational test organization (OTO). 576 FLTS/CC or a designated representative will be the MD for all ICBM tests. The OTO will appoint a test manager (TM), prepare a test plan (TP), write detailed test procedures to properly execute the test and prepare a report providing detailed results after test execution.

1.5.1.2.1. For each ICBM OT&E program OT, excluding OTL (e.g. SELM, SOT, other operational testing), 576 FLTS will coordinate an individual TP and/or TP updates to HQ AFGSC/A3IT no later than (NLT) 60 days prior to the Test Readiness Review Board (TRRB) and have AFGSC/A3 approval NLT 30 days prior to the TRRB. OTL TPs for recurring launches will be written bi-annually and cover all OTLs during the TP effective period. 576 FLTS will coordinate OTL TP renewal NLT 90 days prior to expiration of the previous TP. Supplemental OTL test objectives (e.g. extended range launches, RV fuze modifications, etc.) will require an amendment to the existing OTL TP to assess the specific objectives under test. These amended TPs will be coordinated through HQ AFGSC/A3IT no later than (NLT) 60 days prior to the Test Readiness Review Board and have AFGSC/A3 approval NLT 30 days prior to TRRB. Non-OTL approved TPs and OTL TP amendments are only valid for the duration of each OT. However, TPs may be utilized for a supplemental test under certain circumstances (e.g. urgent/emergency SOT following a scheduled Baseline Update, "-1" tests, etc.).

1.5.1.3. 576 FLTS/Standardization and Evaluation (OGV) will prepare a Test Execution Order (TEO) containing specific requirements that each participating unit must accomplish to ensure mission success. Amendments to the TEO will be published and distributed to participating units.

1.5.1.4. Test Reports will be coordinated through HQ AFGSC/A3IT NLT 30 days prior to the supported decision (e.g. fielding decision, Milestone C decision, etc.) (see Chapters 2 and 3 for OTL and SELM reporting requirements, which differ) in order to provide adequate time for review and approval. Delivery timelines may be tailored to accommodate accelerated test schedules for specific user needs (e.g. as outlined in the *Concept for Software Support for HAC/RMPE and MMP Software*) if coordinated with HQ AFGSC/A3 and included in the applicable TP. Reports must address each of the Critical Operational Issues (COIs), the system's operational effectiveness and suitability, additional information on operational capabilities, and include an assessment of operational mission impacts. These reports must strike the proper balance between system capabilities and limitations while taking into account how well the system performed mission essential tasks. As needed, a production or fielding recommendation will be included for Operational Assessment (OA), Operational Utility Evaluation (OUE), and FDE final reports. All Category I Deficiency Reports (DR) and the top 10 Category II DRs will be listed.

1.6. ICBM Test Forecast. The annual ICBM Test Forecast includes the mission identifier, effected unit, test remarks, test timelines and key test dates for all ICBM OT&E.

1.6.1. HQ AFGSC/A3IT, in consultation with HQ AFGSC/A3IA/A3IN/A4M/A5R/A6O/ IG/Weapons Safety (SEW), 20th Air Force (20 AF)/A3/A4, 20 AF 625 STOS/OSK/OSO, 576 FLTS/ TE, AFNWC/NWIEI ICBM Systems Engineering Office, National Nuclear Security Administration (NNSA)/AL, RTS, USSTRATCOM/ J31/J38 and JFCC GS/J31/J54/J554, 2 ROPS/DOS, and the 90/91/341 Missile Wing (MW) CCs, will publish an annual ICBM Test Forecast prior to 1 October covering tests scheduled in the remainder of the current fiscal year and four subsequent fiscal years. Ensure this schedule is de-conflicted with operational requirements (e.g. annual code change, inspections, etc.), Western Range availability (as required), and coordinate SELM test sites with affected operational units. HQ AFGSC/A3 will approve the test forecast prior to distribution.

1.6.2. HQ AFGSC/A3IT will host two scheduling meetings; one in December and one in June, normally in conjunction with the Joint Test Working Group.

1.6.2.1. Coordination for the upcoming fiscal year schedule will begin following the June meeting. Units and test ranges will be given 20 days to coordinate and provide comment.

1.6.2.2. Following the December scheduling meeting, HQ AFGSC/A3IT will distribute, if required, a revision to the 1 October fiscal year schedule. 576 FLTS will provide inputs for the revision. Units and test ranges will be given 20 days for coordination and comment following the December meeting. If additional revisions are required, HQ AFGSC/A3IT will provide inputs and 10 days will be given for coordination and comment.

1.6.3. HQ AFGSC/A3I, in consultation with 576 FLTS/CC, may approve changes to the approved test schedule. The distribution of the changes will be identical to the original approved schedule.

1.6.4. Failure to comment by the specified dates above indicates concurrence with the proposed test forecast/changes.

1.7. Test Team Training. Training will be accomplished for all operational testing.

1.7.1. 576 FLTS develops a training program consisting of proficiency and certification training:

1.7.1.1. Proficiency Training. Proficiency training includes initial training and supplemental training. It is administered to all test team personnel.

1.7.1.2. Certification Training. Certification training includes test team certification training and mission director/commander training.

1.7.1.3. Test-specific training requirements will be tailored to meet test objectives as outlined by the test requestor.

1.8. Test Team Certification. Test teams will be certified prior to accomplishing any operational test. Medical certification is not required. Furthermore, 576 FLTS test teams do not maintain continual certification for test team positions; positional certification ceases upon test completion or cancellation.

1.8.1. 576 FLTS/OGV develops evaluation materials, conducts test team evaluations for all OT&E and recommends test team certification to the 576 FLTS/CC.

1.9. Mission Certification (MC). Mission certification processes must be developed and employed to identify and mitigate risks associated with ICBM OT&E.

1.9.1. AFGSC/A3I ensures a MC process is applied to all operational testing.

1.9.2. 576 FLTS develops the MC process to identify associated risks and certifies readiness prior to test execution.

1.9.3. The MC process culminates with certification statements at test readiness reviews.

1.10. Test Readiness Review Board. The TRRB is a meeting to determine the readiness to conduct a particular test. TRRBs are conducted at the HQ level, as applicable. AFGSC/A3IT facilitates all TRRBs, reviews briefings and coordinates required organizations' attendance for the TRRB for all tests. With the exception of SELM, TRRBs will take place no less than 5 days, but no sooner than 2 weeks prior to the start of the test. For SELM, TRRBs will occur 1 day prior to test execution. HQ AFGSC/A3 schedule requests are due for coordination to HQ AFGSC/A3IT NLT 30 days prior to the requested TRRB date. Final, read-ahead slides are due to A3IT for coordination NLT 1 week prior to TRRB.

1.10.1. TRRBs will be chaired as follows:

1.10.1.1. HQ AFGSC/A3, or designated representative will chair all TRRBs for AFGSC-directed tests.

1.10.1.2. A poll will be conducted at the end of the briefing. The following offices (or their designated representative) will give a "Go/No-Go" recommendation to HQ AFGSC/A3 for applicable tests (in this order): 576 FLTS/CC, HQ AFGSC/SE, 20 AF/CC, and AFNWC/CC. Additional offices may be added for participation as needed (e.g. Parent Wing/CC for SELM, TF Parent Wing/CC for OTL, 625 STOS/CC for tests involving the ALCS, etc.). Readiness recommendations are made in accordance with (IAW) Table 1.1. 576 FLTS/CC or designated representative will state overall readiness to HQ AFGSC/A3. HQ AFGSC/A3 (or the designated representative) will then make the final "go/no-go" decision.

1.10.2. Table 1.1 outlines the organizations who will certify readiness to HQ AFGSC/A3. Each organization certifies readiness on behalf of all applicable sub-organizations in the responsible chain of command that are participating in the OT&E.

Table 1.1 Certifying Organizations

Office	TRRB Recommendation Role
576 FLTS/CC	Test Organization Readiness/Concerns
HQ AFGSC/SE	Safety Readiness/Concerns
20 AF/CC or Designated Rep.	NAF/ALCS/TF Readiness/Concerns
*AFNWC/CC or Designated Rep.	SPO concerns

NOTE:

"*" Denotes TRRB participation is specific to addressing concerns/issues not previously known from Developmental Testing or engineering assessments

1.11. Developmental Test Launches. Developmental flight tests may be required to evaluate new or substantially modified ICBM weapon system ground or airborne vehicle equipment in support of AFNWC/NWI acquisition programs. In cases where the Program Executive Officer (PEO) approves the use of existing ICBM OT&E infrastructure and personnel as a part of the system acquisition strategy/plan, all requirements of this instruction will apply except those specifically identified in this paragraph. The PEO retains the option to establish a dedicated developmental test team IAW AFI 99-103 and AFI 99-103_AFGSC SUP**.** Additionally, the TO will be published at the beginning of the System Development and Evaluation phase of the acquisition program.

1.11.1. 576 FLTS will:

1.11.1.1. Obtain flight worthiness assessment from AFNWC/NWI for developmental equipment being tested.

1.11.1.2. Ensure launch team is instructed on procedures required to support testing of the developmental equipment.

1.11.1.3. Ensure the TEO identifies the developmental equipment to be tested.

1.11.1.4. Ensure Missile Combat Crew Members (MCCM) are trained in new procedures associated with developmental equipment being tested.

1.11.1.5. Ensure AFNWC/NWI designated representative is informed of all issues that impact the developmental test.

1.11.1.6. Coordinate with AFNWC/NWI to ensure the selection of components meet requirements of the developmental equipment being tested.

1.11.2. AFNWC/NWI has agreed to:

1.11.2.1. Provide test requirements to AFGSC/A3IT for integration with AFGSC, USSTRATCOM and NNSA requirements.

1.11.2.2. Provide any required Type 1 training to the OTO and all other personnel supporting the test (e.g. 20th AF Missile Combat Crews [MCC]).

1.11.2.3. Provide on-site engineering assistance when approved technical data is not available to 576 FLTS.

1.11.2.4. Provide detailed system engineering data reduction and analysis for all tests. Recommend corrective action for failure modes and assess the operational force impact.

1.11.2.5. Provide technical assistance in support of testing and staff assistance for maintenance deficiencies.

1.11.2.6. Provide reliability performance data compiled under the current Air Force collection and analysis program.

1.11.2.7. Provide on-call engineering services in support of HQ AFGSC data analysis and evaluation and submit reports, as required.

1.11.2.8. Provide all test unique hardware requirements and safety studies.

1.11.2.9. Provide technical data, software and personnel as required.

1.12. Responsibilities:

1.12.1. HQ AFGSC/A3 will:

1.12.1.1. Sign and publish an individual TO every 2 years for recurring ICBM OT&E (OTL, SELM & SOT) and as required for other emerging tests, defining overall test objectives and the agencies tasked to support each test.

1.12.1.2. Approve TPs submitted by the OTO.

1.12.1.3. Approve the annual ICBM Test Forecast prior to distribution.

1.12.1.4. Release Performance Reports for distribution within 30 days of receipt from 576 FLTS.

1.12.1.5. Determine the priority of test objectives.

1.12.1.6. Chair TRRBs IAW paragraph 1.10 or designate who will chair TRRB in their absence.

1.12.1.7. Approve/disapprove operational equipment component replacement requests (CRR).

1.12.1.8. Make the final fielding or production decision as required.

1.12.2. HQ AFGSC/A3I will:

1.12.2.1. Through HQ AFGSC/A3IT, execute primary responsibility for the ICBM OTL program.

1.12.2.2. Assign program officers as the primary point of contact for higher headquarters coordination and review of each ICBM OT&E to ensure results satisfy AFGSC test objectives.

1.12.2.3. Coordinate on TOs.

1.12.2.4. Publish the annual ICBM Test Forecast as approved by AFGSC/A3.

1.12.2.5. Approve periodic updates to the annual ICBM Test Forecast, when required.

1.12.2.6. Approve/disapprove associated operation participation.

1.12.2.7. Coordinate on TPs and forward to HQ AFGSC/A3 for approval/publication.

1.12.2.8. Approve Performance Reports prior to forwarding them to HQ AFGSC/A3 for release.

1.12.2.9. Review fielding or production recommendations provided by the OTO as required.

1.12.3. HQ AFGSC/A3IT will:

1.12.3.1. Execute day-to-day program management of ICBM OT&E testing through 576 FLTS.

1.12.3.2. Provide policy and guidance in support of all ICBM OT&E.

1.12.3.3. Designate the OTO for OTL, SELM, SOT and other operational testing.

1.12.3.4. Prepare an individual TO every 2 years for recurring ICBM OT&E (OTL, SELM, and SOT) and as required for other operational testing for HQ AFGSC/A3 signature, defining overall test objectives, the SUT, agencies tasked to support each test and identification of funding, as applicable.

1.12.3.5. Provide mission analysis support to assist in defining test missions to meet current and proposed test objectives.

1.12.3.6. Coordinate on TPs.

1.12.3.7. Coordinate on Performance Reports.

1.12.3.8. Provide on-site support during OT execution.

1.12.3.9. Conduct a Technical Interchange Meeting (TIM) and Flight Test Planning Meeting (FTPM), hosted by the OTO, as needed, for key players to meet and exchange technical information to ensure mission accomplishment. There may be more than one TIM per mission if the complexities of the mission dictate.

1.12.4. HQ AFGSC/SE will:

1.12.4.1. Coordinate with 30 SW/SE to ensure all range safety requirements, roles and responsibilities are met.

1.12.5. HQ AFGSC/A5R will:

1.12.5.1. Budget for and direct disbursement of funds to support and conduct ICBM OT&E.

1.12.5.2. Prepare requirements documents for ICBM tests that support ICBM OT&E.

1.12.6. 576 FLTS will:

1.12.6.1. Provide overall day-to-day program management of ICBM OT&E IAW HQ AFGSC guidance.

1.12.6.2. Assign program officers as the primary points of contact for coordination and review of ICBM OT&E matters.

1.12.6.3. Provide minutes for TIMs and FTPMs and 576 FLTS specific meetings/events.

1.12.6.4. Provide technical assistance in support of testing and staff assistance for maintenance deficiencies.

1.12.6.5. Provide test and evaluation personnel, logistic, technical support, and other requirements as directed by HQ AFGSC/A3I.

1.12.6.6. Provide test Technical Orders (T.O.) for use at VAFB.

1.12.6.7. Validate TF personnel qualifications.

1.12.6.8. Develop and distribute a TEO for each operational test. This document will contain all mission specific requirements each participating unit must accomplish to ensure mission success. Amendments to the TEO will be published and distributed to participating units as required.

1.12.6.9. For weapon system special requests:

1.12.6.9.1. Submit operational weapon system equipment waiver requests signed by 576 FLTS/CC or designated representative to AFNWC/NWIEI for engineering assessment and recommendation. Coordinate through 20 AF/A4 (and MW/CC for SELM) and submit to HQ AFGSC/A3 for approval/disapproval. 576 FLTS will submit an information copy to HQ AFGSC/A3IT/A4M/A6O (as applicable for communications equipment)/ICBM WST and AFNWC/NWIEI. Submit Real Property (RP) /RP Installed Equipment (RPIE) CEM waiver requests coordinated through CE Missile Engineering (MES/CEM) and AFGSC/A7O to HQ AFGSC/A3 for approval/disapproval. Submit an information copy to HQ AFGSC/A4M/ A3IT/A6O (as applicable for communications equipment), and 20 AF/A4/A3. Develop additional internal coordination as required.

1.12.6.9.2. Submit munitions related operational weapon system equipment waiver requests signed by 576 FLTS/CC or designated representative to AFNWC/NWIEI for engineering assessment and recommendation. For SELM, coordinate through MW/CC. Submit to AFGSC/A3 for approval/disapproval. Submit an information copy to AFNWC/NWIEI, HQ AFGSC/A3IT/A4MW, 20 AF/A3/A4 and 798th Munitions Maintenance Group (MUMG)/CC. Develop additional internal coordination as required.

1.12.6.9.3. Submit test-unique weapon system equipment waiver requests signed by 576 FLTS/CC or designated representative to AFNWC/NWIEI for engineering assessment and recommendation. 576 FLTS/CC is final approval/disapproval authority. Submit an information copy to HQ AFGSC/A4M/A3IT/A6O (as applicable for communications equipment)/ICBM WST and 20 AF/A3/A4. Develop additional internal coordination as required.

1.12.6.9.4. For components that do not meet specific T.O. rejection criteria or the impact on flight is unknown, submit Flight Worthiness Assessments (FWA) signed by 576 FLTS/CC or designated representative, to AFNWC/NWIEI for flight worthiness/non-flight worthiness recommendation. Submit an information copy to HQ AFGSC/A4M/A3IT/ICBM WST and 20 AF/A3/A4. Develop additional internal coordination as required.

1.12.6.9.5. For OTL operational components that meet specific T.O. rejection criteria, submit a CRR signed by 576 FLTS/CC or designated representative to AFNWC/NWIEI for engineering assessment and replace/don't replace recommendation. Coordinate CRRs through 20 AF and HQ AFGSC/A3IT/A4M prior to submitting to HQ AFGSC/A3 for approval/disapproval. Submit an information copy to 20 AF/A4 and HQ AFGSC/A3IT/A4M/ICBM WST. For munitions related CRRs, an information copy will also be sent to HQ AFGSC/A4MW and 798 MUMG/CC.

1.12.6.9.6. For OTL test-unique components that meet specific T.O. rejection criteria, submit CRR signed by 576 FLTS/CC or designated representative to AFNWC/NWIEI for engineering assessment and recommendation. 576 FLTS/CC is final approval/disapproval authority. Submit an information copy to HQ AFGSC/A4M/A3IT/A6O (as applicable for communications equipment)/ICBM

WST and 20 AF/A3/A4. Develop additional internal coordination as required. Submit an information copy to 20 AF/A4 and HQ AFGSC/A3IT/A4M/ICBM WST.

1.12.6.9.7. For situations not covered in this instruction, submit requests for guidance to the appropriate agency for direction. Submit information copies as appropriate to 20 AF/A4, HQ AFGSC/A3IT/A4M/A6O (as applicable for communications equipment) ICBM WST, 798 MUMG/CC (for munitions related requests) and MW/CC (for SELM related requests). 576 FLTS/CC is final approval/disapproval authority for implementation.

1.12.6.9.8. In order to keep critical ICBM OT&E processing on schedule, special requests must be processed as quickly as possible without compromising the coordination process.

1.12.6.10. Ensure AFGSC/SE is notified of all 30 SW/SE range safety requirements needed to conduct testing at VAFB.

1.12.6.11. Coordinate with 30 SW/SE for all hazardous operations.

1.12.6.12. Conduct the TRRB.

1.12.6.13. Prepare and sign all preliminary test reports (e.g. Quick Look Report, OTL Preliminary Scoring Report).

1.12.6.14. Prepare a final Performance Report for each test in accordance with AFI 99-103, paragraph 7.5.2 and paragraph 1.5.1.4. of this instruction. Provide detailed performance data for the technical section of the Performance Report.

1.12.6.14.1. Analyze telemetry data and weapon system performance, as required.

1.12.6.14.2. Make a fielding or production recommendation to HQ AFGSC/A3, as required.

1.12.6.15. Attend bi-weekly integrated product team (IPT) for Vandenberg AFB-unique items with AFNWC/NWI.

1.12.6.16. Coordinate on the annual ICBM Test Forecast.

1.12.6.17. Serve as the primary point of contact for coordination and review of ICBM OT&E matters with the 30 SW.

1.12.6.17.1. Maintain host-tenant support agreement with the 30 SW.

1.12.6.17.2. Submit to 2 ROPS/DOF Western Range requirements using the Universal Documentation System (UDS).

1.12.6.18. Coordinate all budget requirements with HQ AFGSC/A3I prior to forwarding to HQ AFGSC/A5R.

1.12.7. HQ USSTRATCOM has agreed to:

1.12.7.1. Have USSTRATCOM/J38 (Nuclear Operations Command and Control Division) serve as the primary point of contact for USSTRATCOM coordination and review of ICBM OT&E issues.

1.12.7.2. Have Joint Functional Component Command (JFCC) Global Strike (GS)/Command Center Division (J31), coordinate requests to conduct

CDRUSSTRATCOM end-to-end connectivity and command and control demonstrations with HQ AFGSC/A3IT, as required.

1.12.7.3. Have USSTRATCOM/ICBM Codes (J384) provides test code material, as requested, to support ICBM OT&E activities.

1.12.8. 20 AF will:

1.12.8.1. Prepare and publish implementing instructions to supplement this instruction.

1.12.8.2. Provide assistance to subordinate units and coordinate with 14 AF to ensure compliance with the provisions of this instruction at the operational base and at VAFB. Submit recommendations for changes to HQ AFGSC/A3IT.

1.12.8.3. Submit all new AFTO 22 change requests resulting from OT&E NLT 2 weeks from the end of test.

1.12.8.4. Provide personnel, equipment and support materials required for each operational test, as specified in the TEO.

1.12.8.5. Determine training requirements for any changes resulting from a SUT.

1.12.8.6. Provide technical assistance for special requests.

1.12.9. 20 AF 625 STOS will:

1.12.9.1. Provide necessary targeting and range safety trajectory materials.

1.12.9.2. Provide ALCS support as required for ICBM OT&E.

1.12.9.3. Coordinate any testing of the ALCS, supported by the E-6B at the Strategic Missile Integration Complex (SMIC) with HQ AFGSC/A3IT to deconflict with the ICBM Test Forecast and SMIC personnel to de-conflict with other SMIC testing.

1.12.9.4. Conduct tests at the SMIC to help accept E-6B aircraft back into the Navy fleet and as required to evaluate changes to equipment or procedures.

1.12.10. AFNWC/NWI has agreed to:

1.12.10.1. Chair bi-weekly IPT meetings for Vandenberg AFB-unique items with 576 FLTS.

1.12.10.2. In memorandum format certify to HQ AFGSC/A3 with courtesy copies to HQ AFGSC/A3I/A3IT/A3IA and 576 FLTS/CC/OGV/TEM that developmental equipment and/or software is ready to enter operational testing in accordance with AFMAN 63-119 no later than 7 days prior to TRRB.

1.12.10.3. Provide the day-to-day management of the (SMIC).

1.12.10.4. Provide personnel and equipment to monitor the test range.

1.12.10.5. Participate with AFGSC in anomaly/failure analysis to include resolving testrelated problems.

1.12.10.6. Review and analyze test results for use as appropriate to develop estimate of weapon system reliability for planning.

Chapter 2

OPERATIONAL TEST LAUNCH

2.1. General. OTL tests and evaluates an operational ballistic missile weapon system in as near to an operational environment as possible during peacetime. In this way, AFGSC determines and verifies ICBM weapon system accuracy and reliability. The flight test key event flow is contained in **Attachment 7**.

2.2. Responsibilities:

2.2.1. HQ AFGSC/A3 will:

2.2.1.1. Select a missile and associated LF components for each GLORY TRIP Mission from a pool based on mission configuration and inputs from AFNWC/NWI, TF Parent Wing and Integrated Product Team. HQ AFGSC/A3 has final determination on sorties that are or are not removed from the pool.

2.2.2. HQ AFGSC/A3I will:

2.2.2.1. In coordination with HQ AFGSC/SEW, review and approve all Launch Analysis Group (LAG) final report recommendations. Once approved, receive quarterly updates on the status of all open recommendations. (IAW AFMAN 91-221_AFGSCSUP *Weapons Safety Investigations and Reports)*

2.2.3. HQ AFGSC/A3IT will:

2.2.3.1. Prepare, publish and maintain the Program Requirements Document (PRD) and Operations Requirements (OR). Approve/disapprove the release of secondary (post-mission) data requests not listed in the PRD. Approve/disapprove the release of any ICBM data requests.

2.2.3.2. Assume Missile Program Office responsibilities as they pertain to treat requirements.

2.2.3.3. Integrate AFGSC, USSTRATCOM, NNSA, and AFNWC/NWI ICBM test requirements.

2.2.3.4. Coordinate on Go/No-Go guidelines at the pre-mission review for OTO use during mission execution.

2.2.3.5. Provide launch day support.

2.2.3.6. Provide special studies required to match changing objectives, configurations, etc., with the range's capabilities.

2.2.3.7. Provide support in determining and updating range and instrumentation requirements to support weapon system accuracy and performance objectives (present and future).

2.2.4. HQ AFGSC/A3IN will:

2.2.4.1. In conjunction with AFNWC/NWI, maintain Weapon System Reliability (WSR) and weapon system accuracy databases.

2.2.4.2. Maintain the Planning Factors database and provide updates to USSTRATCOM through JFCC SGS/J554 on an annual basis.

2.2.5. HQ USSTRATCOM has agreed to:

2.2.5.1. Have JFCC GS/J317 coordinate on ALCS support requests and forward requests to appropriate agencies for tasking.

2.2.5.2. Have USSTRATCOM/J38 and SGS J31/J54/J554 coordinate on the annual ICBM Test Forecast.

2.2.6. 576 FLTS will:

2.2.6.1. Determine sensor coverage and launch window needed for OTL missions to maximize data collection to meet the test objectives.

2.2.6.2. Provide hazards analysis studies. Hazards studies will generally be required for each new mission configuration, target area, or reentry angle.

2.2.6.3. Provide preflight trajectories to verify geometry, objectives and configurations consistent with safety and weapon system constraints.

2.2.6.4. Provide preliminary planning data package to 2 ROPS/DOF approximately T-115 days.

2.2.6.5. Provide FTPM minutes to 2 ROPS/DOF NLT T-60 days.

2.2.6.6. Monitor range instrumentation accuracy by reviewing range documentation and attending range meetings.

2.2.6.7. Develop and publish a TEO for each ICBM OTL NLT T-150 days.

2.2.6.8. Schedule launch dates, launch date changes and launch windows with the Western Range and Joint Pacific Area Scheduling Office.

2.2.6.9. Determine launch Go/No-Go criteria based on AFGSC mission objectives and sensor requirements in coordination with 30th Space Wing Launch Decision Authority (LDA). LDA will make range safety Go/No-Go decisions.

2.2.6.10. For changes, requests for guidance and waivers, ensure that Quality Deficiency Reports will not be used to replace waiver authority for Flight Worthiness Assessments (FWA) and CRRs as outlined in Chapter 1. An Unsatisfactory Report can be used because the DOE is its own waiver authority.

2.2.6.11. Determine OTL components' operationally representative/non-representative status and request flightworthiness assessments, if necessary, when defects are noted in accordance with Chapter 1 of this instruction.

2.2.6.12. Ensure storage is provided for ALCS Test Codes at VAFB.

2.2.6.13. Coordinate on the PRD and OR.

2.2.6.14. Conduct pre-launch collision avoidance (COLA) analysis IAW AFSPCMAN 91-710, Volume 6, *Range Safety User Requirements Manual Volume 6 - Ground and Launch Personnel, Equipment, Systems, and Material Operations Safety Requirement,* Attachment 7, paragraph A7.2.3.

2.2.6.15. Coordinate range safety requirements with range agencies IAW EWR 127-1, AFSPCMAN 91-710 Volume 6, and applicable 30 SW safety requirements.

2.2.6.16. Manage and conduct LAG IAW applicable directives (AFI 91-204_AFGSCSUP, *Safety Investigations and Reports*) in support of anomaly investigations.

2.2.6.17. Coordinate OTL START compliance with 30 SW and ensure the same for associated operations.

2.2.6.18. Provide the 30 SW Plans and Programs Treaty Office (30 SW/XPE) with flight telemetry clarification, interpretive data and products pertaining to OTLs in support of START telemetry requirements.

2.2.6.19. Conduct Readiness Reviews.

2.2.6.19.1. For the Squadron Readiness Review (SRR):

2.2.6.19.1.1. Upon completion of OTL preparation and prior to 30 SW LRR, 576 FLTS will conduct, and 576 FLTS/CC or designated representative will chair, a SRR. The primary focus of the SRR will be mission assurance. The SRR will serve as a certification of compliance with all operational, logistical and safety requirements within instructions, TEO, weapon system T.O.s and Weapon System Safety Rules (WSSRs). At a minimum, the SRR will consist of a brief program presentation and certification of readiness. The OTL test manager, 576 FLTS/TM, 576 FLTS/TE and Task Force Commander (TF/CC) certify readiness to launch to 576 FLTS/CC.

2.2.6.19.2. For the Test Readiness Review Board:

2.2.6.19.2.1. The TRRB will be conducted after the SRR and prior to 30 SW LRR. This readiness review will be conducted by 576 FLTS/CC and chaired by HQ AFGSC/A3 or designated representative as outlined in paragraph 1.10. At a minimum the following items will be covered:

2.2.6.19.2.1.1. Introduction.

2.2.6.19.2.1.2. Mission Overview.

2.2.6.19.2.1.3. Countdown Summary.

2.2.6.19.2.1.4. Completed and Pending Actions.

2.2.6.19.2.1.5. Operational risk assessment of the test that identifies likely hazards associated with the test and identifies risk mitigation measures.

2.2.6.19.2.1.5.1. Clear identification of the likely hazards, to include their severity and mitigation efforts. Hazards should not only include those to personnel participating in the test, but also risks to AFGSC operational assets, missions, and the public.

2.2.6.19.2.1.5.2. Clear evidence that appropriate risk acceptance authorities are informed of such hazards, mitigations and residual risk and that the appropriate authorities formally accept the risk prior to proceeding with the test.

2.2.6.19.2.1.6. Countdown Test Team Readiness.

2.2.6.19.2.1.7. TF Readiness.

2.2.6.19.3. Participate in the 30 SW Launch Readiness Review (LRR).

2.2.6.20. Plan and conduct (with 30 SW support) wing-wide integrated launch rehearsal program. The program must exercise launch team cohesiveness and communication.

2.2.6.21. Provide post-mission analysis and lessons learned to HQ AFGSC/A3/A4/SE, 20 AF/A3/A4 and TF Parent Wing/CC.

2.2.7. 30 SW has agreed to (in accordance with the host-tenant support agreement):

2.2.7.1. Provide assistance to the TF to include administrative, security, dining and billeting, and motor vehicle support.

2.2.7.2. Conduct briefings for all TF personnel to ensure understanding of safety policies, procedures, and criteria. Briefings will include discussions of past missile mishaps or anomalies.

2.2.7.3. Maintain the Integrated Launch Support Center voice communications systems.

2.2.8. 20th Air Force (20 AF) will:

2.2.8.1. Provide necessary personnel to ensure completion of OTL requirements at assigned operational units and all TF activities at VAFB.

2.2.9. AFNWC/NWI has agreed to:

2.2.9.1. In conjunction with HQ AFGSC/A3IN, maintain the WSR and weapon system accuracy databases.

2.2.9.2. Support LAG anomaly investigations, as requested.

2.2.9.3. Provide a list of representative LFs in the deployed force based on specific test requirements as identified in the ICBM test forecast to allow HQ AFGSC/A3 to select a missile and associated LF components.

2.2.9.4. Provide disposition of components if they are considered non-flight worthy and non-repairable.

2.2.9.5. Provide specific testing recommendations (e.g., ground testing or depot level testing) in response to 576 FLTS requests for non-representative or non-flight worthy components.

2.2.9.6. Provide inputs for each performance report to the OTL test manager.

2.2.10. 798 MUMG Det 1 has agreed to:

2.2.10.1. Ensure accomplishment of all reentry system (RS)/reentry vehicle (RV) component repair/replacement actions.

2.2.10.2. Ensure the non-nuclear verification tests are accomplished.

2.2.10.3. Ensure RS build-up sheets are forwarded to 576 FLTS/TEM.

2.2.11. Missile Wings (90 MW, 91 MW, and 341 MW) will:

2.2.11.1. Designate the affected squadron operations officer as the operational unit's OTL manager and point of contact for all OTL planning activities. Operational unit OTL managers will establish and maintain contact with 576 FLTS/CC or designated representative.

2.2.11.2. Appoint a Lieutenant Colonel or Lieutenant Colonel-select as the TF/CC who will be responsible for TF activities and morale, welfare and discipline while supporting the OTL. The TF/CC will be the TF Parent Wing/CC's point of contact (POC) for all TF activities and updates to operational components utilized for the mission. Direct waivers of this requirement to HQ AFGSC/A3I.

2.2.11.2.1. For operations team selection and activities:

2.2.11.2.1.1. Select mission-ready MCCs as defined in AFGSCI 10-1202, *Intercontinental Ballistic Missile (ICBM) Crew Operations*.

2.2.11.2.1.2. MCCs selected should be representative of the operational unit's crew force in regard to experience and duty assignments.

2.2.11.2.1.3. TF MCCs are assigned in a ratio of three crews per LCC. 576 FLTS will direct any changes to this ratio in the TEO.

2.2.11.2.1.4. Administer an evaluation prior to the TF departure for VAFB to crew members whose delinquency date is within 45 days of scheduled OTL date. Ensure monthly training in the Missile Procedure Trainer (MPT), EWO classroom training and test, weapons system classroom training and test, codes classroom training and test, missile safety, and nuclear surety training is current. Crew members are not required to receive monthly recurring training while at VAFB. OTL-specific training will be provided by 576 FLTS. HQ AFGSC/A3I will coordinate with HQ AFGSC/A3IN and 20 AF/A3 on waivers to this requirement. While at VAFB, MCCs that will go restricted due to evaluation delinquency dates must either receive an evaluation at VAFB by home operational unit evaluators or be replaced before they go on restricted status.

2.2.11.2.1.5. TF MCCs must arrive at VAFB with sufficient time to complete briefings and in-processing prior to missile emplacement. The TEO will provide a report date.

2.2.11.2.1.6. Operations T.O.s for the applicable wing will be available from 576 FLTS. When T.O.s require changes, the TF will return their T.O.s to 576 FLTS T.O. library personnel for posting. The TF/CC will ensure T.O.s are returned when OTL activities are complete.

2.2.11.2.1.7. Maintain operational realism consistent with safety and OTL requirements. MCCs will process normal/abnormal status, maintain logs, conduct inspections, etc., as required at the operational unit.

2.2.11.2.1.8. Perform alert readiness monitoring until the OTL ends. MCCs monitoring OTL missiles may participate in the testing of another missile or missile system when such activities do not interfere with primary duties.

2.2.11.2.2. Maintenance team selection and activities:

2.2.11.2.2.1. Select a qualified missile maintenance team (MMT), missile handling team (MHT), electro-mechanical team (EMT) and a maintenance officer in charge, and/or non-commissioned officer in charge to perform operational tasks for OTLs at VAFB.

2.2.11.2.2.2. TF members will be representative of the operational unit's

maintenance force in regard to skill level and duty assignment.

2.2.11.2.2.3. Ensure all applicable training requirements referred to in AFI 21-202 Volume 1 *Missile Maintenance Management* (AFI 21-202V1) and AFI 21-202V1_AFGSC Supplement, (AFI 21-202V1_AFGSCSUP) are current through TF TDY.

2.2.11.2.2.4. Maintain maintenance team integrity. However, if necessary, substitute members may be selected IAW AFI 21-202V1 and AFI 21-202V1_AFGSCSUP.

2.2.11.2.2.5. TF maintenance teams will include, when practical, the same individuals involved in missile removal from the LF and preparation for transportation to VAFB. Operational units may rotate personnel to and from VAFB after coordination with 20 AF and 576 FLTS.

2.2.11.2.2.6. TF must include at least one Quality Assurance (QA) evaluator to observe critical tasks as determined by the TF/CC.

2.2.11.2.2.7. Perform all actions to support the OTL using approved T.O. procedures. TF maintenance personnel will use T.O.s provided by 576 FLTS T.O. library.

2.2.11.2.2.8. Maintenance teams must bring their own personal equipment, including hard hats, gloves, coveralls, steel-toe boots, rain gear and field jackets. TF EMT and MMT members must bring codes locks for each individual.

2.2.11.2.2.9. TF maintenance teams will emplace, check out, and start-up the missile and operational equipment.

2.2.11.2.2.10. TF personnel will be trained by personnel at VAFB on LF familiarization and emergency procedures (EPs) to cover the VAFB unique configuration. 576 FLTS/LGQ will accomplish task evaluation on EPs.

2.2.11.2.3. Provide all specified weapon system components as identified in the TEO.

2.2.11.3. Provide a visit request signed by the unit security manager and a TF Authorization/Notification Roster of personnel participating in the OTL to 576 FLTS Launch Director (LD) no later than 10 working days prior to TF arrival at VAFB. Units may use an electronic General Purpose form. This notification will also include the following for each TF member: name, rank, social security number, security clearance, date and place of birth, and citizenship. They will also provide proof of cryptographic access via AF Communications Security (COMSEC) AFCOMSEC FORM 9 and current training form (AF FORM 4168 or AF FORM 3126).

2.2.11.4. Transportation of TF personnel to and from VAFB should meet mission requirements at the lowest overall cost.

2.2.11.5. At VAFB, the TF will:

2.2.11.5.1. Provide recall rosters to 576 FLTS Missile Maintenance Operations Control (MMOC) and OTL TM.

2.2.11.5.2. Verify MAF and LF status during site familiarization.

2.2.11.5.3. In conjunction with 576 FLTS/CC, exercise technical control and decision authority for operational aspects of the OTL except those involving test-unique range and safety requirements and those jeopardizing OTL objectives.

2.2.11.5.4. Conduct pre-departure briefings and debriefings.

2.2.11.5.5. Coordinate all TF operations and maintenance schedules and actions (especially deviations from normal operational procedures) with 576 FLTS MMOC and LD. Coordinate with parent operational unit MMOC through 576 FLTS MMOC as appropriate.

2.2.11.5.6. Conduct OTL in as near an operational environment as possible:

2.2.11.5.6.1. Only allow qualified/certified MCCs to perform OTL tasks.

2.2.11.5.6.2. The MCC is responsible for the MAF and LF following site familiarization through completion of countdown activities except as specified by this instruction. Responsibility for site security and the missile components begins when custody is transferred from 576 FLTS.

2.2.11.5.6.3. Monitor alert readiness until OTL execution or termination.

2.2.11.5.6.4. Conduct the OTL IAW appropriate T.O.s and countdown documents.

2.2.11.5.6.5. Perform all operational functions necessary to place missile on alert.

2.2.11.5.7. Designate TF officer as the missile safety representative who will ensure safety practices and applicable T.O.s are followed.

2.2.11.5.7.1. Through the LD, maintain continuous liaison with 30 SW/SE to ensure current knowledge and adherence to safety requirements.

2.2.11.5.7.2. Participate in emergency actions in potentially hazardous situations involving the OTL missile and/or TF operated facilities.

2.2.11.5.7.3. The TF/CC will act as a deputy to the Missile Potential Hazard Team (MPHT) weapon system element commander when a MPHT is formed. TF/CC will be trained by 576 FLTS personnel on his/her roles and responsibilities.

2.2.11.5.7.4. Provide technically qualified personnel to assist 30 SW and 576 FLTS personnel as members of the MPHT and Emergency Response Team (ERT).

2.2.11.5.8. TF/CC will verify TF readiness and mission assurance pertaining to TF buildup activities during the 576 FLTS SRR.

2.2.11.5.9. TF/CC will ensure all equipment hand receipts issued by 576 FLTS agencies to TF personnel are cleared and assigned work areas and vehicles are clean before responsible TF members depart.

2.2.11.5.10. If a Safety Investigation Board (SIB) or LAG is formed, the TF will support as requested. For an SIB, the board president will determine whether or not the TF may depart from VAFB to their home unit. HQ AFGSC/A3I will determine whether or not the TF may depart from VAFB to their home unit for a LAG.

2.2.11.5.11. Submit required reports.

2.2.12. 20 AF 625 STOS will:

2.2.12.1. Provide range safety data to: 576 FLTS/TEX, 30 SW/SEL, US Army Kwajalein Atoll/RTS, Boeing Corp, Northrop Grumman Mission Systems, Lockheed Martin Space Systems, and MIT Lincoln Laboratory.

2.2.12.2. Provide operational targeting data in the form of a target case to the 576 FLTS and Northrop Grumman Mission Systems.

2.2.12.3. Provide JPIC if sortie is changing from A-CAT to F-CAT for the OTL. Coordinate with JFCC-GS/J515 (Air Room) to obtain JPIC if sortie is changing from A-CAT to L-CAT for the OTL.

2.2.12.4. Accomplish the following for an ALCS OTL:

2.2.12.4.1. Appoint a Test Conductor-Airborne (TC-A) and a MCC-A for the test.

2.2.12.4.2. Coordinate on Pre-launch/Launch Checklists, and planning and preparation for test, as appropriate.

2.2.12.4.3. Provide ALCS information messages, as appropriate, and provide input to the scheduling of the mission.

2.2.12.4.4. Have 625 STOS/CC dial into the TRRB.

2.2.12.4.5. Provide a representative in the ILSC when available."

2.2.13. HQ AFGSC/A4M will:

2.2.13.1. Immediately review and track all CRRs for applicable actions regarding the deployed force. Consider fleet-wide inspections, technical data changes, waivers, etc. Interface with the AFNWC/NWI as appropriate to accomplish any and all actions deemed necessary. Ensure CRRs, waiver requests, or other actions involving ICBM components are tracked to closure.

2.3. OTL Selection Procedures:

2.3.1. Selection Process. HQ AFGSC/A3 selects a missile and associated LF components from a representative sample of the deployed force. HQ AFGSC/A3IT will solicit inputs from HQ AFGSC/A3IN/A4MI/A4MW, 20 AF/A3N/A4, TF Parent Wing, AFNWC/NWIEI and USSTRATCOM/J38 and JFCC-GS prior to final sortie selection. Sortie selection will be accomplished based on a two-year review of all OTL test objectives taking into account the booster, propulsion system rocket engine (PSRE) configuration, RV configuration, wing rotation and other factors as deemed necessary by HQ AFGSC/A3.

2.3.1.1. HQ AFGSC/A3 will select the sortie 45 days prior to the first day of the month in which the sortie is to be removed from alert. This normally translates to approximately 180 days prior to launch. The applicable unit must have HQ AFGSC/A3 and USSTRATCOM/J38 approval prior to taking the sortie off alert for removal.

2.3.1.2. HQ AFGSC/A3 will issue a Sortie Selection Letter identifying the LF containing the missile selected for the flight test.

2.3.1.3. 576 FLTS will contact the MW from which the OTL missile was selected and determine:

2.3.1.3.1. The selected sortie's on-alert status has not changed since selection and that there are no issues such as weather, maintenance, impassable roads, inoperative primary access hatch, etc. that would prevent a successful missile removal.

2.3.2. The operational wing will not perform maintenance solely to ensure a successful alert readiness test (ART). After completion of the ART, only normal LF weapon system maintenance (e.g., LF faults for which MMOC T.O. fault flow directs maintenance to be performed) will be accomplished. After the ART, 576 FLTS must review all scheduled maintenance actions prior to being performed. 576 FLTS will make the final determination regarding authorized maintenance at the selected sortie. Deviating from this procedure could invalidate the test results for the selected sortie and result in a new sortie selection.

2.3.3. During disassembly, inspection, test and re-assembly, report any defects that exceed allowable criteria to AFNWC/NWIEI and forward copies of discrepancies to 576 FLTS, 20 AF/A4 and OTL TM. If at any time from selection through launch a component is identified as non-representative or non-flight worthy, AFNWC/NWIEI will provide an accounting of similar configured components in the deployed force. Engineering managers will then provide the expected impact on flights and any plans currently underway to remove items in question from the deployed force. After 576 FLTS and 20AF/A4 have reviewed the information, 576 FLTS and 20AF/A4 will determine if the defect is non-representative or non-flight worthy.

2.3.3.1. Operationally representative or non-representative. A component is considered operationally representative if it exemplifies or typifies other components in the deployed force. If a component is found to have a defect, 576 FLTS/CC in coordination with 20 AF/A4 will determine if the component is representative. If the components are being removed from the deployed force on a priority basis and all such components will be removed from the field prior to the next projected planning factor update, HQ AFGSC/A3 must approve selection of another component. However, if the configuration will remain in the deployed force indefinitely, HQ AFGSC/A3 must consider the configuration representative and proceed with launch.

2.3.3.2. Non-flight worthy. A component is considered non-flight worthy if that component is known or suspected to fail, thus preventing the missile from completing its OTL mission. If components are considered non-flight worthy and non-repairable, 576 FLTS will coordinate with AFNWC/NWIEI, 20 AF/A4 and HQ AFGSC/A3 for disposition of the component and recommend another component for HQ AFGSC/A3 approval. AFNWC/NWIEI will provide recommendations (e.g., ground testing or depot-level testing) to 576 FLTS concerning the non-flight worthy component. The following conditions shall be reported as described in the final performance report. If the component fails ground testing or evaluation indicates it would not have supported a successful flight, it will be declared a representative failure. If the component passes ground testing, or engineering evaluation indicates it would have supported a successful flight, it will be declared a no-test since a ground test or engineering evaluation cannot completely replicate flight conditions. When a component is scored a no-test, its replacement will be used to score the flight. If a component is deemed flight worthy but AFNWC/NWIEI wants to subject the component to depot-level testing, they will convey their request via letter to 576 FLTS. 576 FLTS will forward this request through 20 AF to HQ AFGSC/A3 for a decision regarding the component.

2.4. Flight Test Planning Meeting (FTPM). FTPM is normally conducted by HQ AFGSC/A3IT and hosted by the OTO approximately 90 days before launch. The primary purpose of the FTPM is to review the range sensor support plans to meet mission objectives. A FTPM is required for each launch; however, a FTPM may not be required for a second launch attempt unless there are numerous factors that have changed between the two launch dates.

2.5. Part I - Alert Readiness Test:

2.5.1. This part verifies the alert readiness condition of a selected missile by exercising launch critical components through automatic weapon system tests. When notified of missile selection, the operational unit will not perform maintenance, modification or inspections to the selected missile before Part I tests. Accomplish Part I tests on the selected sortie as soon as possible after selection notification. If the selected missile fails any one of these tests, consider this portion of the exercise a failure and notify 576 FLTS and 20 AF. Every effort will be made to ensure there is no extended delay between Part I testing and removal from alert. If a delay is required for any reason, the operational unit will immediately notify 576 FLTS.

2.5.1.1. 576 FLTS will notify operational unit MMOC by telephone of the missile selected and give authority to begin Part I. Notification will allow the affected operational unit to perform Part I tests and dispatch maintenance personnel. The sortie will not be removed from alert until directed by a JPIC. 576 FLTS will notify USSTRATCOM/J38, 20 AF and the OTL TM of the missile selected. 576 FLTS will request a backup guidance set as required.

2.5.2. The following Part I tests, combined with normal monitoring of "No-Go" parameters, check most functions which would prevent a launch if a malfunction occurred. These tests provide weapon system alert readiness, operational countdown reliability data, and provide the maximum possible launch evaluation of the selected launch facility and missile.

2.5.2.1. Sensitive command network test (SCNT).

2.5.2.2. Missile Test.

2.5.2.3. Enable test.

2.5.3. If a missile fails to successfully complete Part I and the failure was caused by operational ground equipment malfunctions, correct the malfunction and continue. If the missile performs satisfactorily, process it for shipment to VAFB. If the failure was caused by aerospace vehicle equipment malfunction, correct the malfunction and return the missile to alert. AFGSC/A3 will select another missile. In either case, report to 576 FLTS and OTL TM as a Part I failure.

2.5.4. Perform the following guidance assessment calibrations (2 hours after completion of Part I tests).

2.5.4.1. Phi Calibration.

2.5.4.2. Inertial Measurement Unit (IMU) Calibration, Segment 1.

2.5.4.3. IMU Calibration, Segment 2.

2.5.4.4. Perturbation self-alignment technique calibration (commonly known as SAT CAL).

2.5.5. If an on-alert backup guidance set is selected, conduct Part I tests on the missile immediately.

2.5.6. Before removing the sortie from alert, obtain missile guidance set (MGS)-peculiar gyro data numbers by accomplishing GENERATE STACK for a target case assigned to the selected MGS and viewing the number on the Target/Execution Plan Case Generation Summary Report. Provide gyro data numbers to 576 FLTS and include in the OTL Sortie Status Report (see Attachment 2).

2.5.7. If a deficiency is discovered during Part I that would have prevented launch, immediately notify 576 FLTS. If this deficiency was caused by personnel or procedural error and applicable components perform satisfactorily, continue the mission. If this deficiency was caused by a hardware malfunction, correct it and return the missile to alert. AFGSC/A3 will select another missile. In either situation report a Part I failure to 576 FLTS and OTL TM.

2.5.8. If a missile stage, missile stage component, or RS malfunctions or is damaged after Part I, notify 576 FLTS and OTL TM. Coordinate with 576 FLTS and OTL TM as necessary to determine if repairs can be made in a timely manner and where repairs must be made. If normal field-level repair can clear discrepancies, proceed with necessary repairs after 576 FLTS coordination. If a discrepancy requires depot-level maintenance, AFGSC/A3 may terminate the mission and select another missile or missile component.

2.5.9. Capture "Depot IMU data."

2.6. Part II - Missile Removal and Transfer:

2.6.1. Part II consists of missile, guidance set, RS and certain other LF hardware removal, component processing at the operational unit, shipment, receipt at VAFB and installation and checkout of range safety equipment. 576 FLTS may direct replacement components in the TEO. After Part I has been successfully completed, the operational unit must:

2.6.2. Remove the missile from alert. Ensure the JPIC is received from JFCC/GS-J515 (Air Room) for L-Cat status or 625 STOS/OSK for F-Cat status prior to removal from alert.

2.6.3. Remove LF ordnance directed by the TEO for shipment to VAFB unless otherwise directed by the TEO.

2.6.4. Remove the guidance set and RS. Inspect the MGS to determine if a plate cover has been installed in place of the MGS optical window. If a plate cover is installed, notify the OTL TM and include this in the GLORY TRIP Status Report. Personnel from 576 FLTS will replace the plate cover with an MGS window, if required.

2.6.5. Conduct a visual inspection to determine overall condition of the RS. Conduct all Reentry System Test Set initial build tests and inspections in reverse order as RS disassembly is being conducted. Provide all test tapes and associate them with applicable components or hardware. Inspect and test all Electro Explosive Devices (documented resistance measurements are required). Exact reassembly of the RS as it was configured on-site is paramount. Record and catalog all hardware associated with each specific RV and configuration of the payload. Segregate attaching hardware into separate bags per RV or payload. Prepare components for shipment IAW procedures stated in applicable T.O.s and this instruction.

2.6.6. Notify the OTL TM of component serial numbers within 48 hours of missile removal.

2.6.7. Prepare the missile stages, RS components, guidance set, and LF ordnance for shipment to VAFB IAW procedures stated in applicable T.O.s and this instruction.

2.6.8. Discrepancy Reporting.

2.6.8.1. During RS/RV processing, immediately report all discrepancies noted during inspections or tests to 576 FLTS, 798 MUMG/CC, OTL TM, HQ AFGSC/A4MW, the ICBM Flight Test Engineer (AFNWC/NWIEI) and RS/RV Engineer (AFNWC/NWI).

2.6.8.2. Report Joint Test Assembly (JTA) discrepancies in accordance with T.O. 11N-5-1, *Unsatisfactory Reports*, as applicable. Closing summary by Defense Threat Reduction Agency (DTRA) will constitute final closure action.

2.6.8.3. Report other RS/RV discrepancies in accordance with AFI 91-204, *Safety Investigations and Reports*, as appropriate. Additionally, report VAFB-specific component discrepancies (i.e. instrumentation, antennas, etc.) in accordance with T.O. 00-35D-54, *USAF Materiel Deficiency Reporting Investigation and Resolution*, as appropriate. Closing summary by DTRA will constitute final closure action for DOE assets.

2.6.8.4. Following assessment of the deficiency (scope, mission impact, etc.), additional actions may be necessary. Several options are: component replacement request, flight worthiness assessment, T.O. waiver, or reselection.

2.6.8.5. Discrepancies which may have significant likelihood of causing mission failure require termination of the event and selection of another missile or RS.

2.6.8.6. Less severe discrepancies could result in component replacement action and continuation of the exercise. In either case, AFNWC/NWIEI will provide the unit shipping instructions so suspect components can undergo additional testing and inspection.

2.6.8.7. 576 FLTS will request a complete engineering evaluation (verification of failure, identification of the cause, and mission impact assessment) from AFNWC/NWIEI. The engineering manager will forward results under separate cover to: HQ AFGSC/A3IT/A3IN/A4MW, 20 AF/A4, 798 MUMG Det 1 (for munitions-related evaluations), and 576 FLTS.

2.6.8.8. In certain other circumstances, suspect components may require T.O. waivers to allow these components to continue on the mission and facilitate accurate assessment under actual launch conditions. 576 FLTS/CC or designated representative, after coordination with HQ AFGSC/A3IT/A4MW, 20 AF/A4M and applicable engineering managers will make the decision to pursue this latter course of action.

2.6.8.9. Info 576 FLTS/CC on all reports.

2.6.9. Direct communication between the unit and AFNWC/NWI is authorized. Identify all missile stage and RS repairs and component replacements, including ordnance items, required after selection by nomenclature, part, serial and lot numbers. The OTL TM must ensure this information is included as inputs to applicable reports. Ship missile stages and components to VAFB IAW movement procedures outlined in this instruction.

2.6.10. Time Compliance Technical Orders (TCTO) Requirements:

2.6.10.1. For mandatory "Prior-to-Flight" modifications (Immediate Action/Urgent TCTOs) complete the required inspection/modification and proceed with the test. If this is not feasible, discontinue the test and AFGSC/A3 will select a modified missile.

2.6.10.2. For a routine TCTO issued against a selected missile/RS/RV/guidance set and not mandatory before flight, continue the exercise without modification.

2.6.10.3. For Immediate Action/Urgent Action TCTO changes issued for flight safety, instrumentation, or other test-unique equipment, 576 FLTS/CC will coordinate with HQ AFGSC/A3I and may suspend the mission until completion of the required inspection/modification.

2.6.10.4. After receipt of an Immediate Action/Urgent Action TCTO, 576 FLTS will develop required maintenance recovery plans.

2.7. Part III - Missile Emplacement to Alert Readiness:

2.7.1. This part consists of transportation of missile components and associated ground equipment and generating the missile to alert status IAW prescribed operational weapon system technical data. The TF, with 576 FLTS oversight, is responsible for operational weapon system maintenance actions from emplacement to missile launch. The TF will assist 576 FLTS personnel with ensuring missiles are configured IAW the TEO (i.e. MGS correct part/SN, PSRE correct part/SN, booster correct part/SN, Mod-7 wafer correct part/SN, etc all match the TEO). 576 FLTS is responsible for all test unique maintenance actions.

2.7.2. MCCs will assume LCC weapon system monitoring responsibility before the test LF is started up.

2.7.3. TF personnel will:

2.7.3.1. Emplace/install MM booster, post boost control system, RS and LF ordnance at the LF. AF Form 504, *Weapons Custody Transfer Document*, will be used for accountability of RS turnover.

2.7.3.2. Perform start-up and place the guidance system in operation. Load the guidance set computer and verify nominal performance.

2.7.3.3. Install keying variables in the LCC and LF.

2.7.3.4. Following initial start-up, perform required calibrations.

2.7.3.5. Follow applicable T.O. procedures to initiate start-up and fault isolation and correction. The date, time, and results of all weapon system tests, commands, and off-alert periods will be included in the TF/CC's report for inclusion in the final performance report.

2.7.4. Contingencies identified in Part II, Missile Removal and Transfer, while the TF is at VAFB also apply for Part III. Any person noting a condition or operation adversely affecting safety of personnel or equipment, or jeopardizing OTL objectives will stop the operation and inform TF personnel and 576 FLTS MMOC. Personnel safety and protection of resources will take priority in all cases.

2.8. Part IV - Alert Readiness and Flight:

2.8.1. This part consists of alert readiness, countdown, launch, flight, and post-mission data evaluation.

2.8.2. The MCC will accomplish weapon system tests and commands including calibrations IAW applicable T.O. procedures. 576 FLTS MMOC will provide directions to accomplish tests and commands IAW T.O. procedures. Except as needed in support of required Operations Directives or post maintenance, the Safety Control Switch (SCS) key and plug will remain installed in the main LF distribution box from startup until all LF final enable procedures are accomplished and the LF is ready to be secured for launch.

2.8.2.1. 576 FLTS MMOC will provide the TF Parent Wing MMOC with a daily update on all status changes, commands/tests run, and maintenance actions taken at the LF.

2.8.3. The TEO will specify the date to attain alert ready status. Alert readiness begins at the completion of start-up, targeting, and associated testing (missile test, enable test, and required remote data change actions).

2.8.4. Unless directed by T.O. or other directive, once an OTL missile has achieved alert readiness, it will not be removed from alert status without prior coordination with 576 FLTS MMOC and TM, and permission granted by 576 FLTS/CC.

2.8.5. TF and 576 FLTS must coordinate LF close out for launch procedures. To evaluate LF/missile systems in a completely launch ready condition, 576 FLTS must perform system checks to verify operation of test unique equipment.

2.8.6. For ALCS launches, 625 STOS will coordinate an airborne test to verify voice communications circuits and ensure the ability of the missile to process ALCS commands. This test is conducted prior to the launch date.

2.8.7. Prior to the start of launch countdown, 576 FLTS Mission Director will conference with the LDA for permission to proceed with countdown and missile launch.

2.8.8. Contingencies:

2.8.8.1. If a missile (e.g. booster, MGS, post boost vehicle, RS/RV, etc.) fails during alert and requires field-level maintenance or depot-level maintenance that can be performed at VAFB, immediately notify the OTL TM, make necessary repairs by either TF or depot personnel as appropriate, and proceed with the test. Use a backup guidance set as directed by HQ AFGSC/A3, if required. 576 FLTS will notify HQ AFGSC/A3IT.

2.8.8.2. If a missile fails during alert and requires depot-level maintenance that can only be done at depot, immediately notify the OTL TM and suspend mission activities. 576 FLTS will coordinate with HQ AFGSC/A3IT/A4M and provide direction to accomplish repairs or request HQ AFGSC/A3 select another missile.

2.8.8.3. If a missile or subsystem failure results in a countdown abort and requires normal field-level or depot-level maintenance that can be performed at VAFB, score it as a countdown failure, make repairs, and proceed with the mission.

2.8.8.4. If a missile failure during countdown requires depot-level repairs at the depot, report on it in the final Performance Report as a countdown failure. 576 FLTS may terminate the mission and HQ AFGSC/A3 will select another missile.

2.8.8.5. If test-specific support equipment failure during countdown results in an abort, document the failure, correct the malfunction, and proceed with OTL activities. The mission will be considered a success if the flight is nominal.

2.8.8.6. If an instrumentation wafer malfunctions and requires removal, the replacement wafer will be mated to the primary MGS. MGS changes will not be made to facilitate instrumentation wafer changes without HQ AFGSC/A3 approval.

2.8.8.7. When any of the following conditions exist, 576 FLTS or HQ AFGSC/A3IT may add a suffix to the GLORY TRIP identifier (e.g., GLORY TRIP 200GM-1) prior to continuing the mission:

2.8.8.7.1. A failure or policy direction results in selection of another missile or major missile component (including using a backup guidance set after successful initial start-up).

2.8.8.7.2. If a missile failure results in countdown failure/abort or launch failure/abort.

2.8.8.7.3. The mission is postponed from the original date identified in the TEO.

2.8.9. Launch Readiness Review:

2.8.9.1. The LRR is conducted to ensure test success, launch timeliness and safety of operations for ICBM launches. This formal review is the decision forum to examine readiness to proceed.

2.8.9.2. Launch Readiness Reviews are chaired by the LDA.

2.8.10. Launch Analysis Group:

2.8.10.1. The purpose of the LAG is to determine the root cause of a mission anomaly and interpret data. The LAG will be comprised of, but not limited to, the following: 576 FLTS/TEMA, 30 SW/SE representative, AFNWC/NWI representative, Northrop Grumman/Vandenberg and Northrop Grumman/Space Park. The NNSA and its associated laboratories and the Western Range and its associated contractors may also be a part of the LAG composition. For anomalies, the LAG may obtain additional expertise as necessary for the investigation.

2.8.10.2. In the case of a mishap, the LAG will provide and interpret the telemetry data and/or any other data to both the safety and accident investigation board President (Reference AFI 91 204_AFGSCSUP and AFMAN 91-221_AFGSCSUP for further guidance).

2.8.11. Forming the LAG:

2.8.11.1. Following an anomaly, HQ AFGSC/A3I/SEW will determine if a LAG is required. If a LAG is deemed necessary, 576 FLTS/CC will appoint, in writing, a LAG chairperson. At any time during the LAG investigation, if the anomaly is determined to have force-wide impact, then AFGSC/CC will appoint a new LAG chairperson. The chairperson will be appointed from a pool of officers with ICBM test experience. If at any point the anomaly is deemed a mishap, transition to AFI 91-204_AFGSCSUP and AFMAN 91-221_AFGSCSUP to determine mishap investigation and reporting requirements.

2.8.11.2. LAG investigations include, but are not limited to, determination of launch hangfire causes, aborts, missile/instrumentation failures and other anomalies that occur after the first launch vote is issued. Throughout the LAG process, AFGSC/A3 and/or

HQ AFGSC/SE may provide additional guidance. AFGSC/CC will release the final LAG report for an anomaly.

2.8.11.3. Classification for investigation data, data products and reports will be made in accordance with the ICBM SCG.

2.8.11.4. 576 FLTS will manage and control investigations and/or correction of test-unique equipment or weapon system malfunctions occurring after acceptance of the second execute launch command.

2.8.11.5. A Launch Anomaly Response Team (LART) will be formed in the event of an abort, hangfire, or premature termination to determine the circumstances surrounding the condition. The LART will perform the procedures required to return the LF to a safe condition.

2.8.11.6. The LAG will use telemetry data products, weapon system status indications and printouts, missile combat crew logs, training records (576 FLTS only), weapon system build records, launch telemetry data, launcher environmental protective system and any other form of data product relevant to the investigation. The LAG can also utilize personnel interviews as long as there is not a Safety Investigation Board or Accident Investigation Board in progress.

2.8.11.7. 2 ROPS/DOF will "impound" or "impound with caveat" all range data, as directed by the LAG chairperson. If impound with caveat is used, the range will produce and release data as directed by the LAG chairperson. 2 ROPS/DOF will maintain all original raw data and data products. Copies of data will be provided to the LAG, as required, to facilitate investigation. The LAG will coordinate range data requests with HQ AFGSC/A3IT. All data will be retained for a minimum of 2 years. HQ AFGSC/A3, in conjunction with HQ AFGSC/SE, will determine data disposition after 2 years.

2.8.11.8. When a LAG investigation is convened, HQ AFGSC/A3I will determine whether or not the TF may depart from VAFB to their home unit. HQ AFGSC/A3I will coordinate the release of the TF with the LAG chairperson.

2.8.11.9. The LAG Chairperson will provide status reports. AFI 91-204_AFGSCSUP may be used as the template. Status reports will be provided to HQ AFGSC/A3/A3I/A3IT/A3IN/A4/ A4M/A4MW/SE/SEW with info copies to HQ AF/A10O, HQ AFGSC/A5M/A4MI and 576 FLTS/CC. Status reports will be published weekly. AFGSC/A3 will determine distribution to USSTRATCOM/J38 and JFCC GS/J3/J31, HQ AF/A10N/A10R and 20 AF/A3/A4/SE.

2.8.11.10. At a minimum, the investigation will provide an engineering analysis report and summary that includes findings, causes, and recommended corrective actions. AFNWC/NWI and contractors may be required to provide technical expertise in investigating these incidents. Send final status message and reports to HQ AFGSC/A3/A3I/A3IT/A3IN/A4M/A4MW, and 576 FLTS/CC with info copies to HQ AF/A10O/TE, USSTRATCOM/J3/J38 and JFCC GS/J3/J31, HQ AFGSC/A4MI/A5M/ SE/SEW, 20 AF/A3/SE, 798 MUMG/CC/ Det 1/CC (for munitions-related reports), AFNWC/NWI, Northrop Grumman Vandenberg, and Northrop Grumman Clearfield.

2.8.11.11. The NNSA and weapons laboratories may be provided final message and report copies at the direction of AFGSC/A3.

2.8.11.12. HQ AFGSC/A3IN will determine ICBM force impact and HQ AFGSC/SEW will determine high accident potential requirements.

2.8.11.13. OTL LAG Report. A LAG Report is required whenever there is an identified missile anomaly. An initial message is required within 8-hours after mishap. Weekly LAG status messages will be provided to all required addresses for the final LAG Report. Use AFI 91-204, AFI 91-204_AFGSCSUP and AFMAN 91-221_AFGSCSUP as guidelines to accomplish reporting, as information becomes available. Transmit follow-up reports with a routine precedence. The LAG will prepare a final LAG Report when an investigation is complete.

2.8.12. Test asset recovery actions:

2.8.12.1. The *Memorandum of Understanding between the National Nuclear Security Administration (NNSA) and the Department of the Air Force Regarding Joint Testing and Assessment of the Nuclear Weapons Stockpile* will serve as the basis for recovery of test assets.

2.9. Maintenance Procedures: Credibility of the AFGSC flight test program depends largely on the control and safe transfer of missile components from an operational unit LF to the VAFB LF. The operational unit and 576 FLTS will augment these procedures, as required, to ensure OTL components are properly documented, controlled, and handled during all phases of an OTL.

2.9.1. Missile Wings (90 MW, 91 MW, and 341 MW) will:

2.9.1.1. Expedite the shipment of all missile components, as identified or as amended by the TEO, to VAFB for OT. QA will inspect all OTL components prior to shipping. If damage is identified during inspections, QA will provide inputs to the unit for preparation of an OTL Component Damage Report on all damaged components found (See Attachment 4).

2.9.1.2. Appoint an OTL maintenance Non Commissioned Officer in Charge (NCOIC) to monitor all shipping procedures from the operational unit. The representative must ensure all missile and LF component part numbers and serial numbers agree with those taken from selected sortie/sites and they are properly marked for shipment. Maintain constant contact with OTL TM and OTL planner.

2.9.1.3. Ensure no component of an OTL missile leaves a LF or maintenance facility without the OTL identifier prominently marked on it, and no component is released for packing and crating without specific guidance regarding how and where the container will be marked.

2.9.1.4. Remove and obliterate old markings from container to avoid losing small components and simplify Traffic Management Office (TMO) monitoring.

2.9.1.5. Ensure the proper VAFB FB or FV account is properly annotated on containers and fully documented.

2.9.1.6. Mark pallets "DO NOT SEPARATE."

2.9.1.7. Direct TMO to block space to final destination to ensure en-route stations do not separate or break up pallets.

2.9.1.8. Mark all containers and documentation with Emergency and Special Program (ESP) Code 7V. ESP Code 7V is used to help identify a ballistic missile OTL conducted

IAW this instruction. Strict compliance with container markings and documentation with ESP CODE 7V ensures the wing is ultimately reimbursed for OTL movement charges. Wings are expected to budget for and ship components during OTL activities. Upon receipt, 576 FLTS will forward applicable information to HQ AFGSC/A5R for determination of unit reimbursement for OTL shipping charges, as required.

2.9.1.9. Use signature service on each shipment of OTL components to provide positive control throughout the shipping process.

2.9.1.10. Send shipping notification by priority message to all appropriate agencies.

2.9.1.11. TMO will initiate a report of shipment (REPSHIP) to en-route and VAFB TMOs to ensure the shipment has been sent. Transmit REPSHIP by message within 2 hours after the shipment departs the originating system.

2.9.2. 576 FLTS will:

2.9.2.1. Through TMO (scheduling), acknowledge receipt of shipment by message within 24 hours of arrival.

2.9.2.2. Identify appropriate equipment storage areas by OTL mission designator.

2.9.2.3. Upon receipt of unit shipping notifications, establish close coordination with VAFB Central Receiving and appropriate agencies to monitor arrival of components, suspense all inbound shipments and follow-up with TMO on shipments not received by the established due date to include the initiation of tracer actions.

2.9.2.4. Process issue transactions for repair cycle assets to be expensed or consumed when the OTL mission concludes using demand code "K." This will preclude establishing due in for maintenance details and the need for initial issue authorization.

2.10. Movement Procedures: Strict compliance with the marking, handling, and notification instructions are mandatory to protect the integrity of operational test concepts.

2.10.1. Missile Stage(s) Movement Procedures:

2.10.1.1. Based on established movement dates, AFNWC/NWI, in coordination with the local TMO, will arrange transportation between the operational unit and VAFB. 20AF/A4M will assist as requested to ensure a coordinated effort between the operational unit and AFNWC/NWI for all missile movements.

2.10.1.2. The operational unit TMO will comply with AFNWC/NWI surface movement instructions for missile components. This may include Government Bill of Lading (GBL) preparation, citing AFNWC/NWI second destination funds, and obtaining route orders from the Military Traffic Management Command (MTMC).

2.10.1.3. AFNWC/NWI will arrange missile stage movement logistics. The participating operational unit TMO will comply with AFNWC/NWI instructions on these movements. This may include GBL preparation citing AFNWC/NWI second destination funds and obtaining route orders from the MTMC.

2.10.1.4. Before shipment, operational units will notify the OTL TM of estimated departure time and estimated time of arrival (ETA) at VAFB.

2.10.1.5. After missile stages depart from the operational unit to VAFB, the operational unit Command Post will notify the 30 SW Command Post and 576 FLTS MMOC via

telephone (576 FLTS MMOC ensures 20 AF/A4M is notified by message) identifying the serial numbers of each stage en route to VAFB.

2.10.1.6. Operational unit TMO will advise 30 SW Command Post of all en-route delays as they occur. 30 SW Command Post will notify OTL TM of any changes.

2.10.1.7. 576 FLTS will ensure 30 SW Treaty Office is notified IAW the START requirements prior to movement of any missile stage and after launch of test missile at VAFB.

2.10.2. Aerospace Vehicle (AVE) Component Movement Procedures:

2.10.2.1. Operational units will notify 576 FLTS by telephone of the transportation mode, all applicable documentation numbers and estimated arrival date of each component concurrent with shipments of the guidance set(s). Follow up this telephone call with a message (priority precedence) containing the same information IAW AFI 21-103, *Equipment Inventory, Status and Utilization Reporting*, and AFI 16-402, *Aerospace Vehicle Programming, Assignment, Distribution, Accounting, and Termination*. Send the message to 576 FLTS, 798 MUMG Det 1/CC (for RS/RV components), 748 SCMG Item Manager, and 20 AF/A3/A4.

2.10.2.2. Use signature service on each shipment to provide positive control throughout the shipping process.

2.10.2.3. Stencil the following information on the outside of the containers at the time of packing IAW Table 2.1. (color to contrast with other markings). On stage containers, make the markings on the provided space on the right rear door):

Table 2.1. Markings.

OTL (At least 2-inch numbers and letters)
GT XXX (Sortie Identifier)
NOTIFY 576 FLTS/TMOO (At least 1/2 inch letters)
IMMEDIATELY UPON RECEIPT

2.10.2.4. Ship MGS parameter tape or disk with their corresponding guidance set.

2.10.2.5. Remove MGS battery from the MGS and pack them in a separate container. Ship the primary MGS and MGS battery with the downstage if possible; if they must be shipped separately (transportation priority 1). Prepare separate shipping documentation for the MGS and MGS batteries even if they are shipped together.

2.10.2.6. The operational unit Technical Engineering Section will send a printed copy of the Integrated Maintenance Data System histories of the primary and back-up MGSs to the 576 FLTS Instrumentation Laboratory (576 FLTS/TMRI). History prints will cover the period from MGS installation through shutdown for OTL. Ship MGS expanded maintenance data acquisition system history with the MGS.

2.10.2.7. To standardize expensing of MGS batteries, operational units should ship the batteries "maintenance to maintenance" (576 FLTS via DD Form 1149, *Requisition and Invoice/Shipping Document*). When requesting MGS batteries required to build up the replacement missile from host base supply, use ESP CODE 7V to identify expense

actions in support of OTL requirements. 576 FLTS will return unused MGS batteries to parent units.

2.10.2.8. Ship the PSRE separately (transportation Priority 1). The desired mode of shipment is via government carrier. Ship PSRE historical records with the PSRE "maintenance to maintenance" to 798 MUMG Det 1 via DD Form 1149.

2.10.3. For RS Components and Ordnance Movement Procedures 798 MUMG has agreed to:

2.10.3.1. Ship all RS/RV components identified in the TEO to either 798 MUMG Det 1 munitions supply account (FV 4610) or directly to 798 MUMG Det 1/MXWSR, Building 1530, 35th Street, Vandenberg AFB CA 93437-5246.

2.10.3.1.1. All components should ship as transportation Priority 1. Use signature service on each shipment to provide positive control throughout the shipment process.

2.10.3.1.2. Provide a designated munitions inspector to process ordnance. Prepare RS/RV and LF ordnance for shipment IAW T.O. 11A-1-10, *Air Force Munitions Surveillance Program and Serviceability Procedures*, and Code of Federal Regulations 49, part 177.848.

2.10.3.1.3. Forward shroud rocket motor initiator will be removed for shipment IAW Department of Transportation directives and shipped separately due to compatibility concerns. Package the ordnance with the associated RS/RV and specify the location from which each was removed. Send all RS components in the same shipment.

2.10.3.1.4. All RS/RV and ordnance historical and maintenance records, including the buildup sheets, will accompany the items shipped to either the FV4610 or FB/FE4610 supply accounts.

2.10.3.1.5. Provide copies of the RS build-up sheets to AFNWC/NWI. In addition to required markings, the packing agency will stencil the following on the outside of all items packed for shipment to Vandenberg AFB (color to contrast with other markings) described in **Table 2.2**.

Table 2.2. Markings.

OTL (At least 2-inch numbers and letters)
GT XXX (Sortie Identifier)
NOTIFY 798 MUMG DET 1/MXWSR (At least 1/2 inch letters)
IMMEDIATELY UPON RECEIPT

2.10.3.2. The unit will send an RS Components and Ordnance Movement Report (Attachment 3). Update the initial report as each subsequent shipment departs the operational base.

2.10.3.3. 798 MUMG Det 1 is responsible for receipt and handling of all Munitions Supply Account (FK4610) nuclear accountability reporting, conventional ordnance items and FB/FV 4610 controlled RS/RV components.

2.10.3.3.1. OTL items will not be repaired or replaced without direction from 576 FLTS and AFNWC/NWIEI. Report RS/RV discrepancies noted during inspections or electrical tests to AFNWC/NWI (depending upon which Air Logistics Center (ALC) is responsible for the component), HQ AFGSC/A4MW, 576 FLTS, and the OTL test manager. 576 FLTS will ensure proper notifications are made to HQ AFGSC/A3IT/A4MW. 576 FLTS will determine OTL waiver or component replacement action. Should component replacement be directed by 576 FLTS, the responsible ALC will provide shipping instructions for the defective component so additional testing or inspections can be accomplished.

2.10.3.3.2. 798 MUMG Det 1 has agreed to store, document and issue all ordnance and inspect/test ordnance for the reentry system.

2.10.3.3.3. FB/FV 4610 supply account, Vandenberg AFB, will initiate replacement action for all unserviceable ordnance or RS components.

2.10.3.4. During RS/RV build up and ordnance processing, QA will document discrepancies and forward copies of the report(s) to the TF/CC, 20 AF/A3/A4, HQ AFGSC/A3IT/A4MW, and 576 FLTS. Reference all discrepancies to the applicable T.O. and/or AFMC publication depicting the standards required.

2.11. Maintenance Activity Documentation.

2.11.1. Process and file historical maintenance documents generated during receipt through launch functions at VAFB IAW 00-20 T.O.s and, for RS/RV maintenance, AFI 21-204_AFMCSUP. Dispose of all records IAW the AF RDS.

2.11.2. The unit is responsible for expeditious processing of all maintenance documents to 576 FLTS IAW AFGSCI 21-202, *ICBM Maintenance Management* and is also responsible for the technical accuracy of information entered on maintenance documents.

2.11.3. Configuration Data. The OTL test manager and LD will verify OTL missile configuration (major components and software) IAW the TEO. 576 FLTS will certify appropriate targeting data is issued to the TF and the LD will certify that those materials are used in targeting operations.

2.11.4. 576 FLTS will generate specific OTL task requirements in the Integrated Maintenance Data System.

2.12. Requisition and Disposal of Supplies. When the requirement is identified or 45 days prior to the need date, request those supplies necessary to reposture LFs selected for OTL. Process requests normally with one exception: use ESP CODE 7V (GLORY TRIP).

2.12.1. Process serviceable assets at VAFB after OTL launches as follows:

2.12.1.1. Turn in all items not to be returned to the operational unit to base supply at VAFB.

2.12.1.2. Using current Serialized Control Asset Reporting System procedures, process those items with Expendable, Repairable, Recoverable Cost Designator (ERRC) Designator XD1 to be returned to base of origin through the VAFB Chief of Supply.

2.12.1.3. Using normal turn-in procedures (AFMAN 23-110, *USAF Supply Manual*), process those items with ERRC designator XD2 to be returned to base of origin through the VAFB Chief of Supply.

2.12.1.4. Return end of quarter type assets (ERRC XB3/XF3) to base of origin and process them as "maintenance to maintenance" (DD Form 1149) shipments to preclude additional expensing upon receipt.

2.12.1.5. Process Equipping Authorized and in use Detail accountable (ERRC NF2/ND2) assets IAW instructions issued by HQ AFGSC/A4R when deployed from the base of origin.

2.12.1.6. 798 MUMG Det 1 has agreed to return RS/RV shipping boxes to the operational unit unless otherwise directed.

2.13. Reporting. Reporting is essential for effective OTL program management as well as for accurate evaluation of weapon system performance. Reporting requirements encompass two primary areas: status of program events and the detailed information following completion of each event. Data must be acquired during the alert readiness period, countdown, launch, and flight through impact. Transmit all unclassified and classified messages for GLORY TRIP missions via Defense Messaging Service and/or appropriate level email. For copies sent to email addresses, send document in Acrobat PDF format.

2.13.1. OTL Sortie Status Report (Attachment 2). The unit is responsible for reporting OTL status and schedule changes. The unit must prepare an initial report at the completion of Part I. Updates to the initial report are required after Part II and if schedule changes occur. Send report(s) to 576 FLTS OTL TM and 576 FLTS/TMOS within 5 days of completion of each part and immediately upon schedule changes.

2.13.2. OTL RS Components and Ordnance Movement Report (Attachment 3). The unit is responsible for reporting the status of all RS components and ordnance movements for hardware associated to each OTL within 5 days of occurrence. Updates to this message may be required if there is a delay in component movement dates or additional shipments are required.

2.13.3. OTL Component Damage Report (Attachment 4). The unit will report any damaged or defective components discovered during the OTL process within 5 days of occurrence. This includes any components (e.g. RV body sections) damaged or defective but not sent to PANTEX or VAFB.

2.13.4. OTL Mission and Preliminary Scoring Report (Attachment 5). This report is the first transmission of information on results of a GLORY TRIP operation. The OTO will issue the report using routine precedence, NLT 8 hours following the launch. If a mission results in an abort or a flight anomaly with no score provided by downrange sensors, issue the report within 6 hours of abort/anomaly and transmit using immediate precedence. The report will provide background information for nominal missions. For other than nominal missions, report the fact there was a failure and if destruct commands were/were not issued. Only addressees with a need-to-know will be informed of failure modes through applicable messages and reports. Required safety reports will be accomplished through the appropriate safety channels.

2.13.5. OTL Final Scoring Report (Attachment 6). The OTO will issue final RV scores using this report for a nominal missile NLT launch +7 days for a KMISS only scored mission or radar only scored mission, or launch +14 days for a launch involving the LIDSS.

2.13.6. OTL Performance Report. 576 FLTS will submit the OTL report to HQ AFGSC/A3IT within 60 calendar days from receipt of the last data item. Classify the report

IAW the ICBM SCG. Reports will be IAW HQ AFGSC/A3IT approved format and include at a minimum an executive summary, POC listing, and content consistent with guidance in AFI 99-103 and as tailored to the objectives of the test, and the decision makers' needs for information about system effectiveness and suitability. Upon request from HQ AFGSC/A3I/A3IT, any required edits will be made and the updated report submitted back to HQ AFGSC/A3IT within 48 hours.

2.13.6.1. TF/CC, 576 FLTS LD, AFNWC/NWI, and OTL contractor support personnel will provide inputs for each performance report to the OTL test manager.

2.13.7. To be an effective measure of operational capabilities, OTL activities must be representative of the deployed force. Therefore, performance reports must contain comments on all events and actions during the entire mission that could affect operational realism for each test. This includes comments on procedures, personnel actions and missile system performance, as well as inputs from the operational unit TF.

Chapter 3

SIMULATED ELECTRONIC LAUNCH - MINUTEMAN

3.1. General. SELM tests ICBMs in their deployed environment at operational bases without an actual launch. SELM tests the selected ICBMs from day-to-day operation to issuance of first stage ignition. SELM test activities provide reliability data for the ICBM weapon system. The SELM key event flow is contained in Attachment 9.

3.1.1. SELM LCCs and LFs are electrically isolated from an operational squadron of ICBMs and specially configured for safety to allow testing of all critical commands in the deployed environment. A SELM configured squadron typically consists of two LCCs and six LFs. Deviations to these configurations may be authorized in the TEO if necessary. SELM test activities are divided into four parts.

3.1.1.1. Part I: Alert Readiness Test.

3.1.1.2. Part II: SELM Posturing/Deposturing.

3.1.1.3. Part III: Launch Demonstration.

3.1.1.4. Part IV: Deposturing/Reposturing.

3.2. Responsibilities:

3.2.1. HQ USSTRATCOM has agreed to:

3.2.1.1. Assign J38 as primary point of contact for USSTRATCOM coordination and review of SELM issues.

3.2.1.2. Have JFCC GS/J317 coordinate ALCS support requests and forward requests to appropriate agencies for tasking.

3.2.1.3. Provide Preparatory Launch Command-A (PLC-As) for use during SELM tests.

3.2.1.4. Have JFCC GS/J317 coordinate requests from 625 STOS to conduct USSTRATCOM command and control and end-to-end connectivity demonstrations (e.g. exercise emergency action message (EAM) transmission).

3.2.1.5. Have USSTRATCOM/J384 provide test code materials as requested for SELM testing.

3.2.1.6. Have JFCC/GS-515 provide the JPIC for L-Cat status sorties.

3.2.2. 576 FLTS will:

3.2.2.1. Assign a TM-A, TM, and Test Conductor (TC).

3.2.2.2. Develop and publish a TEO for each SELM test. The SELM TEO will be published NLT T22 weeks prior to Last Line Isolation. The TEO will serve as the test start message, outlining dates for the airborne and ground test days.

3.2.2.3. Provide assistance in support of testing and technical support for maintenance deficiencies.

3.2.2.4. Coordinate on SELM TSD.

3.2.2.5. Review and coordinate on all unit maintenance and operations lesson plans.

3.2.2.6. Present a pre-test briefing to the operational unit prior to each SELM test.

3.2.2.7. Create/maintain a database of Cat II and special objectives.

3.2.3. 20 AF will:

3.2.3.1. Ensure completion of SELM requirements at the assigned operational units.

3.2.3.2. Prepare and publish implementing instructions to supplement this instruction.

3.2.3.3. Act as waiver authority of operational T.O. steps during all phases of SELM testing after coordination with 576 FLTS.

3.2.3.4. Provide assistance to ensure operational units (Missile Wings) comply with the provisions of this instruction.

3.2.4. AFNWC/NWI has agreed to:

3.2.4.1. Maintain and assure operability of SELM test equipment and the ALCS mobile instrumentation facility (MIF).

3.2.4.2. Arrange for transportation and delivery of a loaded SELM mobile test unit (MTU) to and from the operational units.

3.2.4.3. Provide on-site technical advice to HQ AFGSC and operational units during the test.

3.2.4.4. Participate with HQ AFGSC in anomaly/failure analysis to include resolving test-related problems beyond unit capability during all parts of SELM testing.

3.2.4.5. Provide "SELECT" personnel to support the SELM and to any Anomaly Analysis Team (AAT) formed by the MW/CC.

3.2.4.6. Conduct detailed anomaly analysis of all anomalies/failures not resolved by the AAT and report results to HQ AFGSC/A3IT/A4M/SEW and 576 FLTS when investigation is complete. Data releases to outside agencies require HQ AFGSC/A3IT approval.

3.2.4.7. Develop and maintain T.O.s for SELM testing.

3.2.4.8. Provide MIF for airborne test day of each SELM test. The MIF will have capabilities to analyze real-time and recorded ALCS UHF commands. The MIF and technicians to operate it will arrive at the test unit at least 24 hours prior to airborne test.

3.2.4.9. Provide training on installation and use of SELM test equipment to unit training personnel as required prior to the start of each SELM test.

3.2.4.10. Provide technical assistance as required.

3.2.4.11. Coordinate on TSD and secondary test objectives.

3.2.4.12. Ensure Strategic Missile Integration Complex (SMIC) availability for TSD dry run.

3.2.4.13. Coordinate on and/or provide selected sites for SELM Testing.

3.2.4.14. Review and provide comments on the TP and perform any special tests as required.

3.2.5. Missile Wings (90 MW, 91 MW, and 341 MW) will:

3.2.5.1. Maintain overall responsibility for the execution of a SELM conducted at their unit.

3.2.5.2. Provide operations and maintenance personnel for the deposture/posture of LCCs and LFs, develop SELM lesson plans, train/schedule personnel to support the test, and performance of all operational test activities.

3.2.5.3. Designate a lieutenant colonel as the SELM TSM directly responsible for the conduct of the test. Direct any waivers on this requirement to HQ AFGSC/A3IT. The TSM will:

3.2.5.3.1. Conduct test activities in a manner that will provide for safe, timely, efficient, and economical accomplishment of the test.

3.2.5.3.2. Exercise overall unit management and control of all test activities.

3.2.5.3.3. Appoint a Personnel Reliability Program (PRP)-qualified maintenance officer and NCOIC.

3.2.5.3.4. Coordinate with the TM and approve all maintenance activities (both SELM and normal maintenance) at all test facilities from completion of alert readiness tests through test completion.

3.2.5.3.5. Ensure accomplishment of and compliance with this instruction, the implementing TEO and TP, SELM technical data and weapon system safety rules.

3.2.5.3.6. Act as approval authority, in conjunction with 576 FLTS/CC, for the TSD.

3.2.5.3.7. Review and coordinate on all unit produced maintenance and operations SELM test lesson plans.

3.2.5.3.8. Ensure QA verification of SELM test LF configuration prior to guidance set start-up.

3.2.5.3.9. In conjunction with TM and SELM maintenance Officer in Charge (OIC), ensure SELM Critical Task Certification Matrix is accurate and updated prior to the TRRB.

3.2.5.3.10. If required, ensure Weapons and Tactics Flight EWO Section (OSKX) assists in writing the classified annex to the TSD. Complete annex prior to any operations training.

3.2.5.3.11. Provide storage for all ALCS test codes through Codes Section (OSB).

3.2.6. 20 AF 625 STOS will:

3.2.6.1. Appoint a TC-A and an MCC-A for the test and provide a key personnel message to identify these positions using the format identified in Attachment 8.

3.2.6.2. Coordinate on TSD, planning and preparation for test, as appropriate.

3.2.6.3. Provide ALCS information messages, as appropriate, and provide input to the scheduling of the mission.

3.2.6.4. Ensure 625 STOS/CC participates in the TRRB. If available, provide a representative in the test command post during the airborne portion of the SELM Test.

3.2.6.5. Request ALCS support through USSTRATCOM.

3.2.6.6. Provide the required target materials for F-Cat status sorties.

3.3. Preparation Procedures:

3.3.1. HQ AFGSC/A3IT publishes the TO as required. 576 FLTS publishes the TEO approximately 22 weeks prior to each test.

3.3.2. GIANT PACE Key Personnel Message (Attachment 8). For each SELM test the operational unit will send a GIANT PACE Key Personnel Message identifying key personnel not later than 5 days after receipt of the implementing TEO. Key personnel appointed by the MW/CC are as a minimum, the TSM, operations officer, maintenance officer, security OIC/NCOIC, and the maintenance NCOIC. Written notification of appointment will immediately be made to HQ AFGSC/A3IT/A4M, 20 AF/A3/A4, and 576 FLTS.

3.3.3. The TSM forms a SELM Working Group (typically, MW/CC/CV, OG/CC/CD, MXG/CC/CD, SQ/CC, OSK, Safety, OSS, and OGV) and begins planning for SELM activities to include: SELM posture/OPLAN deposture, personnel training and development of lesson plans, procurement of supplies, and receipt of required SELM test equipment from "SELECT" in the MTU. Prepare and publish the operations order 8 weeks prior to Last Line Isolation. Send a copy of the unit operations order to HQ AFGSC/A3IT/SE, 20 AF/A3/A4, and 576 FLTS. Brief the unit's staff on all phases of the planned operation.

3.3.4. The TM will develop a TSD for controlling all test activities during Last Line Isolation, isolation verification and Part III (launch demonstration). The TSD outlines specific test conduct and objectives. This document will integrate SELM and weapon system T.O. procedures, WSSRs, and AFGSC directives. It is a written schedule of events, actions, responses and expected indications, status displays and results. The draft TSD will be distributed to 576 FLTS, "SELECT", and the SELM working group 8 weeks prior to the test. The final TSD will be published NLT two weeks prior to the test.

3.3.4.1. The TSD must contain demand-response, step-by-step actions for:

3.3.4.1.1. Last Line Isolation.

3.3.4.1.2. Ground/airborne test preparation and isolation verification.

3.3.4.1.3. Ground/airborne incremental test commit actions.

3.3.4.1.4. On-site test evaluation.

3.3.4.1.5. Emergency actions for safety related anomalies.

3.3.4.1.6. Contingency actions for conducting the airborne test by ground LCCs.

3.3.4.1.7. Anomaly analysis actions.

3.3.4.1.8. Squadron restoration.

3.3.4.1.9. Special procedures, if required.

3.3.4.2. If using an exercise message from USSTRATCOM during any test increment, the TSM through 20 AF/A3NK will request exercise messages as required by CDRUSSTRATCOM Emergency Action Procedures, Volume 12, *Exercise Support Procedures*.

3.3.5. 14 weeks prior to test week, operations and maintenance training personnel should begin developing SELM operations and maintenance lesson plans based on WSSRs, SELM

T.O.s, the TEO, TP, TSD and this instruction. The TSM, TM, and AFNWC/NWI representative (maintenance only) will review and coordinate on the final lesson plans to ensure SELM test requirements are met.

3.3.6. Approximately 8 weeks prior to test week, have an AFNWC/NWI representative and the SELM MTU, containing SELM test equipment arrive at the tasked wing. An AFNWC/NWI representative will provide an overview of SELM configuration and maintenance procedures to key unit training personnel. This overview in no way relieves unit personnel of their responsibility to develop and implement a training program based on appropriate technical data, safety rules and AFGSC directives. An AFNWC/NWI representative will also review maintenance lesson plans.

3.3.7. Also approximately 8 weeks prior to test week, the TM will present a pretest briefing to the unit senior staff and SELM working group, outlining test objectives, dates and key personnel. 576 FLTS will accomplish a dry-run of the TSD at the SMIC prior to the pretest briefing.

3.3.8. The TSM and appropriate members of the working group will develop a schedule for deposturing sorties for SELM testing, bringing them to SELM alert and returning them to alert after Part III. Six weeks prior to test week, the schedule will be sent to the TM and AFNWC/NWI. After TSM and TM approval of the deposture/reposture schedule, JFCC/GS515 (Air Room) will provide JPICs for L-Cat status sorties or 625 STOS/OSK will provide the necessary targeting materials for F-Cat status sorties before removing/returning sorties from/to alert. To minimize impact, USSTRATCOM may direct the sequence of sortie deposture/reposture. According to AFGSCI 10-901, Volume 1, *Intercontinental Ballistic Missile (ICBM) Emergency War Order (EWO) Operations*, sorties may not be depostured prior to the date set out in the JPIC. Sorties are also repostured according to information contained in the JPIC, usually NLT 19 calendar days after the final test day.

3.3.9. The TM will arrive at the unit at least 4 weeks prior to test week and will have the TSD in final draft form upon arrival. The TSM and TM will finalize the TSD and distribute approved final copies at least 2 weeks prior to test week.

3.3.10. Operational units will conduct training for all personnel involved in the SELM test. Training will include, but not be limited to, a thorough review of applicable provisions of this instruction, the SELM T.O., WSSRs, unit operations order, the TEO, special procedures for conducting the test, code component control requirements, test organization and management, missile procedures trainer orientation, and test complex configuration.

3.3.10.1. Only certified MCCs will be selected and trained to support the SELM test. Lesson plans and training scripts will be developed based upon job performance requirements and tasks contained within the TSD. Units will coordinate training scripts with the TM and TC for proper presentation. Operations training will include supplemental lesson plans for SELM deposture and reposture. These lesson plans will be conducted daily at the unit pre-departure briefing during deposture and reposture phases.

3.3.10.2. All maintenance personnel involved in the SELM test will meet AFI 21-202, Volumes 13, *Missile Maintenance Management*, training requirements. Maintenance teams performing special test procedures will be thoroughly trained and certified in test unique procedures.

3.3.10.3. Specific training requirements for SELM personnel are outlined in this subsection.

3.3.10.3.1. If possible, unit key personnel should observe a SELM test at another unit. This serves as familiarization and training on SELM test procedures. Personnel, if possible, may also observe a SELM test on board ALCS aircraft.

3.3.10.3.2. Maintenance teams penetrating a SELM-configured LF for any reason except for emergency situations must be SELM trained.

3.3.10.3.3. Train quick reaction maintenance (QRM) teams on site safing and emergency shutdown procedures. Place them on standby, in non-test squadrons, during Part III to ensure they are capable of responding to and safing any non-test LF exhibiting an unsafe condition.

3.3.10.3.4. Train test evaluation teams (TET) on site safing and emergency shutdown procedures, quick look inspection procedures, SELM control monitor tape retrieval and proper site shutdown following simulated execution. Dispatch a TET on standby to each MAF in the test squadron and at ordnance sites during Part III.

3.3.10.3.5. Train operations and maintenance personnel on duty in the test LCCs and LFs on test countdown operations, TSD use, reporting, anomaly procedures, emergency procedures, and code control requirements encountered during testing phases.

3.3.10.3.6. Operations personnel on duty in non-test LCCs must be trained in test countdown operations, TSD use, reporting and emergency procedures.

3.3.10.3.7. The AAT must receive training in anomaly investigation/analysis procedures prior to initiation of Part III activities.

3.3.11. Units conducting a SELM test are AFGSC's "most knowledgeable resource" for identifying SELM T.O. deficiencies and ensuring SELM T.O.s are compatible with weapon system operations and maintenance technical data. In order to assure adequacy of SELM technical data, units will:

3.3.11.1. Conduct a complete review of the SELM T.O. approximately 13 weeks prior to test week. Submit Urgent Air Force Technical Order (AFTO) 22s if changes are not needed until commencement of SELM posturing or Emergency AFTO 22s if changes are required prior to commencement of SELM posturing.

3.3.11.2. Submit changes through normal channels. Provide information copies to 20 AF/A3/A4, 576 FLTS, and AFNWC/NWIEI “SELECT”.

3.3.12. Part I - Alert Readiness Test. Approximately 1 week prior to the start of scheduled SELM posture, the TM will verbally direct an ART to each test facility. These tests check most functions that would prevent launch if a malfunction occurred and provides a base-line evaluation of each facility and missile prior to maintenance activities for SELM posturing.

3.3.12.1. Designated tests will be addressed to each test LF by the parent LCC and include:

3.3.12.2. Sensitive Command Network Test.

3.3.12.3. Missile Test.

3.3.12.4. Enable Test.

3.3.12.5. Inhibit Test and Computer Memory Verification Check.

3.3.12.6. If a missile fails to successfully complete ART, correct malfunctions and re-accomplish ART.

3.3.12.7. Retain a detailed record of each command and all system responses including appropriate printer tapes/crew logs for both normal and abnormal indications for inclusion in the final Performance Report.

3.3.12.8. Within 24 hours of ART completion, submit a SELM Status Report (Attachment 10).

3.3.13. Part II - SELM Posturing (Deposturing):

3.3.13.1. SELM trained maintenance teams will configure test facilities for SELM as specified in the TEO, WSSRs and appropriate SELM T.O.s and TP by SELM trained maintenance teams. QA personnel must observe/verify all test LF/LCC deposture activities.

3.3.13.2. Normal security procedures apply for all test facilities throughout the entire deposture, test and reposture period (reference AFGSCMAN 31-108GM331-108, *ICBM Systems Security*).

3.3.13.3. Plans and Scheduling and MMOC must ensure all maintenance teams and team members dispatching to SELM LFs are SELM trained, SELM work orders are properly marked and maintenance discrepancies are not repaired just to ensure a successful test.

3.3.13.4. The TSM and TM must review all scheduled maintenance actions prior to being performed at test LCCs and LFs. Deviating from this procedure could invalidate the test results for that LF or LCC. Wait until the test is complete to clear any LCC or LF discrepancies/deficiencies found during the test (clear during the reposture).

3.3.13.5. Remove and return to base the RS at any LF where ordnance will be expended, only one LCC will be test-configured, or if a nuclear safety related anomaly occurs.

3.3.13.6. Modify test LFs by installing SELM test equipment as required. SELM qualified personnel will:

3.3.13.6.1. Install RS/RV simulators.

3.3.13.6.2. Accomplish isolation IAW the appropriate SELM T.O.

3.3.13.6.3. Replace all critical component operational codes, except the secure data units and KS-60 cryptographic units, with test codes. LCCs, LFs, and ALCS are configured with EXCLUDED test codes.

3.3.13.6.4. Install and configure Communication Equipment Interface Units (CEIU) to ensure Performance Assessment Data System (PADS) data is recorded from the test LFs as well as the operational LFs. Depending on where CEIUs are already installed and which LCCs are selected for test, it may be necessary to install a CEIU in an LCC supporting test LFs or an LCC supporting the operational LFs on the non-test side of the squadron. PADS settings must be adjusted prior to CEIU start up and shut down to allow for the configuration changes. Coordinate with the Boeing

Guidance Representative to perform this function prior to any CEIU start up or shut down.

3.3.13.6.5. Electrically isolate test LCCs and LFs from the remainder of the operational squadron.

3.3.13.6.6. Verify electrical isolation using SELM T.O. and TSD isolation verification procedures.

3.3.13.6.7. Install a lock pin assembly in the SCS after start-up in SELM configuration. Remove lock pin assembly in the SCS after Last Look Inspection is accomplished at each test LF. Install missile safing pins in the test missiles.

3.3.13.6.8. Unit QA personnel will verify the proper configuration of each test site prior to MGS start-up.

3.3.13.6.9. Target test missiles with normal target assignments/execution plans and bring to SELM alert.

3.3.13.7. SELM test provides capabilities to activate or simulate activation of the following LF ordnance fired devices: launcher closure door, upper umbilical critical leads disconnect, guidance & control umbilical release and retract, MGS battery and missile suspension system articulating arms. Activation will occur at two sites each SELM. Simulate this event at all remaining test LFs.

3.3.13.8. At least one launcher closure door every other year will be activated. When a launcher closure door is activated, the operational unit will construct an arresting barrier per SELM T.O. to restrain the launcher closure door at the activated LF. Simulate launcher closure door activation at all remaining test LFs.

3.3.13.9. Critical leads disconnect, guidance and control umbilical release and retract and missile suspension articulating arms will normally be activated at two LFs per test and will be directed in the TEO. This event is simulated at all other test LFs.

3.3.13.10. Do not expend MGS batteries on SELM tests unless special testing is required. Remove all MGS batteries. The portion of Terminal Countdown (TCD), which normally occurs on airborne power, will take place using a ground power source allowed by SELM MGS battery by-pass procedures. When actual activation of the MGS battery is directed by the TEO, remove expended MGS battery from the MGS, place it in an approved storage container, and await disposition instructions from 576 FLTS.

3.3.13.11. Following MGS start-up in SELM configuration, secure each test facility. Conduct all maintenance at SELM alert test facilities by using appropriately trained SELM qualified maintenance teams. Teams dispatching to a SELM LF will pre-coordinate with the TSM or TM. If pre-coordination is not possible (e.g. a critical or emergency situation), notify the TSM or TM as soon as practical. If a non-SELM trained maintenance team dispatches to a SELM LF, then a SELM trained maintenance team must dispatch to the SELM LF to ensure proper completion of maintenance and proper SELM configuration.

3.3.13.12. Submit a SELM Status Report (Attachment 10) within 24 hours after all test facilities are postured to SELM alert. An LF is on SELM alert when SELM equipment is installed, SELM codes are loaded, applicable post-maintenance is complete for the sortie to be called on alert, and a last look inspection is accomplished. An LCC is on SELM

alert when SELM codes are installed and Last Line Isolation and isolation verification are complete.

3.3.13.13. Handle test LFs which are to operate on LF emergency power during SELM commit as follows:

3.3.13.13.1. Place LFs designated in the TEO or TP in the LF emergency power mode IAW the appropriate SELM T.O.. Leave LFs on emergency power at least 15 hours, but less than the T.O. 21M-LGM30F-102, *Organizational Maintenance -- Minuteman Operational Capabilities and Characteristics (Vandenberg AFB, Wing I-VI)*, system emergency survivability period. If T.O. 21M-LGM30F-102 emergency survivability period is less than 15 hours, immediately notify the unit TSM and TM. Do not allow LF to be left on emergency power in excess of the T.O. 21MLGM30F-102 system emergency survivability period for any reason. Do not test LFs on emergency power if previously on batteries for an extended period of time. During test activities, do not allow the batteries to discharge below T.O. limits.

3.3.13.13.2. After the LF is placed on emergency power, accomplish an initial and then hourly storage battery output voltage check IAW appropriate SELM T.O. Additionally, accomplish a storage battery output voltage check just prior to execution and just after TCD. The TSD will contain necessary steps to verify the LF is on emergency power and for an on-site TET to report voltage readings at prescribed times.

3.3.13.14. MCCs at test LCCs must continuously monitor the SELM ready status following Last Look Inspections through key-turn. Loss of SELM ready status requires immediate dispatch of SELM trained maintenance personnel to determine the cause. Loss of SELM ready status will be indicated by:

3.3.13.14.1. Reset of Ground Maintenance Response (GMR) 15.

3.3.13.15. Unit personnel will conduct a Last Look Inspection IAW applicable SELM T.O. and this instruction of each test LF (LCC will occur during Last Line Isolation) prior to the TRRB and Part III activities. A team composed of SELM qualified QA personnel, the SELM maintenance officer and/or other personnel designated by the unit commander will conduct this inspection.

3.3.13.15.1. The purpose of this inspection is to verify:

3.3.13.15.1.1. Proper connection of all SELM test equipment.

3.3.13.15.1.2. Proper safing of applicable AVE.

3.3.13.15.1.3. Proper installation of all SELM cables.

3.3.13.15.1.4. Missile safing pins installed.

3.3.13.15.1.5. Proper installation of isolators.

3.3.13.15.1.6. Proper installation of RS/RVs (RS/RV removed or electrically disconnected from the MGS and mechanically mated to the SELM spacer) at the test LFs.

3.3.13.15.2. The Last Look Inspection team will also verify command line removal at secondary test LCCs. If a maintenance team penetrates a test LF for any reason after Last Look Inspection, another Last Look Inspection must be accomplished.

3.3.13.16. After a Last Look Inspection has been performed at a test LF, the Last Look Inspection team will seal the launch tube opening and I-Box with a signed/dated paper label. After a Last Look Inspection has been performed at a test LCC, the Last Look Inspection team will seal the I-Box with a signed/dated paper label. If a seal is not intact or has been tampered with, that portion of the Last Look Inspection will be re-accomplished.

3.3.13.17. Upon completion of Part II and prior to Part III, the TSM will work with 576 FLTS to conduct a TRRB IAW paragraph 1.10. This TRRB will serve as a certification to HQ AFGSC/A3 that all operational, logistical and safety requirements within instructions, TEO, SELM T.O., weapon system T.O.s and WSSRs have been complied with. After certifications, the unit commander and the TSM will sign a certification statement certifying the unit is ready to conduct the test. As a minimum, the following personnel or designated representative must verbally certify their respective actions are complete and are ready to conduct the test:

3.3.13.17.1. TSM.

3.3.13.17.2. TM.

3.3.13.17.3. TC-A.

3.3.13.17.4. Safety.

3.3.13.17.5. Maintenance officer or person who actually accomplished Last Look Inspection.

3.3.13.17.6. Weapons and Tactics Flight representative.

3.3.13.17.7. Codes Flight representative.

3.3.13.17.8. 576 FLTS/CC.

3.3.13.17.9. Unit Operations Group/CC.

3.3.13.17.10. Unit Maintenance Group/CC.

3.3.13.17.11. 20 AF/A3 representative.

3.3.13.18. Last Line Isolation and isolation verification are normally accomplished on the Friday prior to test week. Prior to Last Line Isolation, all SELM LCCs must be fully configured and LFs must be on SELM alert. After Last Line Isolation, ensure no test or non-test sorties in a test squadron (except as directed by the TSD) are in calibration (except for post-maintenance actions or TSD requirements).

3.3.14. Part III - Launch Demonstration. Part III begins with the initiation of isolation verification on both airborne and ground days and ends with confirmation of successful terminal countdown by on-site maintenance TET using SELM equipment.

3.3.14.1. Actual SELM testing is divided into separate airborne test and ground test phases.

3.3.14.1.1. Typically, 50% of the test sorties will be incrementally simulated launched by MCCs from an ALCS on the first test day. On the second test day, MCCs in the LCCs will incrementally simulate the launch of remaining sorties. The third test day serves as a back-up for either airborne or ground test completion.

3.3.14.1.2. All activities must be closely coordinated, timed, and controlled and will not be scheduled without prior coordination with the TM. Part III is designed to provide ground system reliability data points for planning. During SELM tests this process begins with the first critical command (hot time PLC, Enable, or Execute Launch command) and ends with TCD or last critical command for each test increment. Make maximum use of standard T.O.s and operating procedures to enhance operational realism. The TSD does not replace operational T.O.s.

3.3.14.2. For SELM tests, sorties are scored only on the basis of launch reliability (LR). LR is a probability an ICBM will launch the first time directed. During SELM tests LR begins and ends with the first and last critical command (hot time PLC, Enable, or Execute Launch Command). This process begins with the first critical command and ends with TCD or last critical command for each test increment. SELM sorties will be scored using criteria in the SELM Reporting Section of this instruction.

3.3.14.3. The TM will lead execution of the test countdown. The TSM, with concurrence from 576 FLTS and TM, has authority to delay and/or reschedule the test countdown when in their judgment:

3.3.14.3.1. Nuclear, missile, or ground safety will be compromised.

3.3.14.3.2. Test activities will interfere with the wing mission in support of Operational Plans (OPlan).

3.3.14.3.3. The accomplishment of primary, secondary, or special test objectives is jeopardized.

3.3.14.4. All decisions affecting a test countdown will come from the TSM, or will be passed to him/her from higher authority to be communicated to test elements concerned. TSMs will coordinate activities through the TM by means of the TSD. All actions having reference to the SELM T.O. will be mandatory, whether of a routine or emergency nature. Include in the TSD detailed instructions for emergency and/or "back out" actions to be performed in case certain contingencies other than those requiring specified mandatory responses are encountered. The unit commander (or designated representative) and 576 FLTS/CC or designated representative, will confirm all decisions to hold, reschedule or continue the test.

3.3.14.5. As specified in the TSD, safety, security forces, and other required personnel will be in position for immediate response to any contingency. Do not accomplish critical commands until all required teams are in their designated positions.

3.3.14.6. At test LFs where ordnance activation is being simulated (all SELM Test Set Ordnance Activation switches in SIMULATE position), maintenance TET need not be present at the site during Part III. However, the unit must have sufficient TET teams on standby to retrieve SELM Test Set printouts from unmanned test LFs and conduct a Quick-Look inspection within 24 hours of TCD. Dispatch a TET on standby to each MAF in the test squadron. Place a TET at test LFs where ordnance is being activated (any SELM Test Set switches in the LIVE position). This team will be stationed topside or in the launcher equipment room at LFs where the launcher closure door is not being activated and maintain communication with the MCC. For LFs activating the launcher closure, TETs will ensure all personnel exit LF fenced areas and maintain site security from the LF access road. At ordnance sites, TETs will make a Quick-Look inspection of

SELM test equipment and the test LF IAW SELM T.O.s to determine TCD success. Immediately report out of tolerance conditions either from SELM test set printouts or visual inspections of hardware (ordnance devices or weapon system hardware) to the TSM. Do not take further action, except in an emergency situation, until TSM direction is received.

3.3.14.7. Dispatch one QRM team on standby to each non-test squadron on airborne test day. QRM teams must be trained on site safing and emergency shutdown procedures and capable of responding to and safing any non-test LF exhibiting an unsafe condition.

3.3.14.8. Dispatch an Anomaly Analysis Management Team (AAMT), composed of a maintenance officer, technical engineer, and QA person to the primary test MAF. The AAMT must be trained on anomaly analysis procedures. Dispatch the AAMT to test facilities, as required, to assist in anomaly analysis.

3.3.14.9. After isolation verification confirms that test missiles, all supporting personnel, equipment, and facilities are ready for execution, the TSM (with concurrence of the TM and 576 FLTS representative) will advise the unit commander and request permission to proceed with test activities.

3.3.14.10. MCCs in the test LCC(s)/ALCS will accomplish enabling and commit as directed by the TM using the TSD.

3.3.14.11. The TSM will remain in the Test Command Post to coordinate test activities, quick look analysis efforts, and direct various recovery activities. After simulated launch of an ordnance site, do not execute further increments until a quick look analysis for that ordnance site is complete. Additionally, quick look analysis will be accomplished at the end of each test day and any other time abnormal status indications warrant.

3.3.14.12. During testing periods on airborne and ground test days, the following applies to facilities configured for SELM testing:

3.3.14.12.1. Security forces will not conduct any security reaction exercises.

3.3.14.12.2. Do not schedule any maintenance.

3.3.14.12.3. Ensure no test or non-test sorties in a test squadron (except as directed by the TSD) are in calibration.

3.3.14.12.4. Submit a SELM Terminal Countdown Report (Attachment 13) after airborne/ground test day is complete. This will serve as the test stop message for airborne/ground test days.

3.3.15. Part IV – SELM Deposturing (Reposturing):

3.3.15.1. Reposture test facilities to alert as specified in SELM and maintenance T.O.s.

3.3.15.2. Return CEIUs to pre-test configurations. Coordinate with Boeing Guidance Representative to ensure correct CEIU and PADS settings prior to CEIU start up or shut down.

3.3.15.3. Reposture test facilities to alert NLT date/time specified in TEO and JPICs.

3.3.15.4. Return SELM test equipment to base where the unit will inspect and document equipment condition. Load SELM test equipment into the SELM MTU and ship as directed by AFNWC/NWIEI.

3.3.15.5. After all test facilities are repostured to alert, submit a SELM Status Report (Attachment 10).

3.3.16. Anomaly/Failure Analysis:

3.3.16.1. Unless waived by the MW/CC or designated representative, immediately implement an anomaly/failure analysis for failure to achieve test objectives due to hardware/software anomalies, for countdown aborts or for significant anomalies occurring during Part III (SELM Launch Demonstration). 576 FLTS/CC and/or MW/CC may also implement an anomaly/failure analysis for significant anomalies occurring during Parts I, II and IV. SELM anomalies and the details of the investigation are classified IAW the ICBM SCG.

3.3.16.2. The anomaly analysis required by this instruction will in no way infringe upon the requirements of or relieve responsibility for accident/incident investigation and reporting IAW AFI 91-204 and AFGSC alternate reporting guidelines.

3.3.16.3. The MW/CC or designated representative is responsible for the investigation of any test objective failure, countdown abort, or significant anomaly. Assistance from the on-site AFNWC/NWIEI "SELECT" is mandatory for investigation of Part III failures/anomalies. If required, request "SELECT" assistance for Part I, II or IV anomalies.

3.3.16.4. MW/CC or designated representative will chair an AAT conducting investigations. An AAT will consist of the following members or designated representatives plus any others MW/CC deems appropriate:

3.3.16.4.1. SQ/CC.

3.3.16.4.2. TSM.

3.3.16.4.3. TM.

3.3.16.4.4. Maintenance officer.

3.3.16.4.5. "SELECT" team.

3.3.16.4.6. 576 FLTS/CC or designated representative.

3.3.16.4.7. Wing missile safety officer.

3.3.16.4.8. Chief, Technical Engineering Flight.

3.3.16.4.9. Chief, Quality Assurance.

3.3.16.4.10. Chief, Standardization/Evaluation.

3.3.16.4.11. Chief, Operations Training.

3.3.16.4.12. The AAMT (On-site maintenance officer and technical engineer).

3.3.16.5. The anomaly analysis portion of SELM testing cannot be over emphasized. Integrity of the test site must be maintained and a thorough analysis/investigation made and reported. This is the only way deficiencies can be identified and corrected.

3.3.16.6. Immediately report anomalies occurring during Part II to MW/CC. During the notification process, the TSM will also request permission to form the AAT.

3.3.16.7. If the AAT is formed during Part III, the TSM and/or TM will ensure TET is standing by (manned LF) or will dispatch TET and AAMT to penetrate LF (unmanned LF). When an LF is penetrated, the TSM or TM will provide the team with preliminary instructions for emergency procedures, maintaining site integrity, and gathering status (Anomaly Analysis Section of TSD).

3.3.16.8. Do not enter test LFs evacuated for safety reasons until approval for safe entry is declared according to provisions of the SELM T.O.s. Only personnel specifically assigned, approved, and trained to conduct failure analysis will be permitted entry into failed LFs.

3.3.16.9. It is absolutely essential that all agencies make every effort to preserve integrity of the test LF or LCC configuration until such a time that disruptions will have minimal bearing on further investigation efforts. For example, if initial visual inspection of the LF and SELM equipment indicates any anomaly, do not safe the SCS to change any pre-launch configuration. Also, the SELM equipment will remain in the "on" condition and will not be reset.

3.3.16.10. The AAT will form in the SELM test command post or some other location with access to the SELM countdown net and develop a preliminary investigation plan. This plan will include the following:

3.3.16.10.1. Immediate actions required of the AAMT or TET.

3.3.16.10.2. Guidance to SQ/CC and TSM as to whether the remaining portions of the test can be safely continued. Make every effort to process the remaining portions of Part III in a manner consistent with actions required for emergencies, personnel safety, WSSRs, and nuclear surety.

3.3.16.10.3. A preliminary plan for maintaining/returning the site to a safe configuration and maintaining site integrity.

3.3.16.10.4. An outline of on-site investigation actions and how the investigation will proceed.

3.3.16.10.5. Should a significant anomaly occur which requires extensive depot analysis, the AAT investigation will proceed up to a point where a formal request for depot assistance is required. In this case, request AFNWC/NWI support.

3.3.16.10.6. The AAT will prepare a SELM Anomaly Analysis Report (Attachment 14) detailing results of its investigation. The report will cover all events, analysis results and recommendations resulting from the investigation. If further investigation by AFNWC/NWI is required, the AAT report will contain a statement that further analysis is being conducted by AFNWC/NWI.

3.3.16.10.7. Fully document all anomalies experienced during any portion of the SELM test in the Performance Report. ”SELECT” will provide a final report when their investigation is completed.

3.3.16.10.8. 576 FLTS/CC or designated representative may impound hardware to formally evaluate anomaly indications or failures, as required. The fact that an anomaly occurred is UNCLASSIFIED; however, classify details of an anomaly or the results of an anomaly according to appropriate classification guides.

3.4. Logistics Procedures. This section covers maintenance actions required to prepare and test SELM-configured LFs under conditions and configurations approximating an operational launch. Instructions for a specific unit will be published in the TEOs, as required.

3.4.1. Missile Wings (90 MW, 91 MW, and 341 MW):

3.4.1.1. The unit will appoint a maintenance, operations, and security OIC to monitor all maintenance/operations/security actions associated with each SELM. Project officers will report directly to the TSM on maintenance/operations/security matters associated with each SELM test.

3.4.1.2. Maintenance personnel at each test unit will accomplish test preparation and refurbishment. In addition to special test procedures, normal AFGSC maintenance procedures and policies will remain in effect. Any deviation from standard procedures will require specific approval from the TSM, TM, 576 FLTS representative and 20 AF/A4.

3.4.1.3. The operational unit will develop a detailed maintenance flow plan for all maintenance test requirements associated with SELM testing.

3.4.1.4. Clear all unaccomplished TCTOs that would affect a SELM test prior to initiation of testing. Do not perform maintenance solely to ensure a successful test. After completion of Part I, (and subsequent start-up in SELM configuration), secure and treat each test LF as if it were an EWO facility. Perform normal weapon system maintenance. Conduct all maintenance at SELM alert test facilities by using appropriately trained SELM qualified maintenance teams. Teams dispatching to a SELM LF will pre-coordinate with the TSM and/or TM. If pre-coordination is not possible (e.g. a critical or emergency situation), notify the TSM and/or TM as soon as practical. If a non-SELM trained maintenance team dispatches to a SELM LF, then a SELM trained maintenance team must dispatch to the SELM LF to ensure proper completion of maintenance and proper SELM configuration. Deviating from this procedure could invalidate test results for that LF. Clear any discrepancies/deficiencies found after the test during reposture after the test is complete.

3.4.1.5. All maintenance personnel involved in SELM testing must satisfy AFI 21-202 training required/qualifications.

3.4.1.6. All maintenance teams, to include all team members identified to perform maintenance in the test squadron, will receive special SELM training. MMOC will be provided a roster of personnel/teams identified, briefed, and qualified to perform maintenance at test configured LCCs and LFs. Plans and Scheduling, maintenance shop schedulers/supervisors, and/or MMOC (as applicable) must assure those maintenance teams dispatching to SELM test LFs/LCCs are SELM trained.

3.4.1.7. Issue test unique Job Control numbers for all tasks associated with this test. Over-stamp SELM on work orders. If directed, retain SELM work orders until the SELM Performance Report is complete.

3.4.1.8. Have maintenance teams available to respond to an emergency within the test unit on test days. This includes on-site TETs at LFs where ordnance is being expended and four QRM teams (one per each non-test flight MAF). Dispatch an additional QRM team within each non-test squadron on airborne test day.

3.4.1.9. Meet the requirements for providing maintenance teams to respond to an emergency within the test unit on test days (including AAMT, TETs, and QRMs) as outlined in this directive.

3.4.1.10. Use appropriate test designated codes and code components for all test LCCs and LFs. Control and handle these components IAW EAP-STRAT Volume 16, *ICBM Code Component Control Policy and Procedu*res and AFGSCI 91-1005, *Intercontinental Ballistic Missile (ICBM) Launch Control and Code Systems*.

3.4.1.11. Isolate interconnectivity and configure SELM test LFs IAW applicable SELM T.O. requirements, TEO, this instruction, WSSRs, and the TSD for successful testing procedures.

3.4.1.12. Accomplish refurbishment as soon as possible after completion of the test. AFGSC maintenance teams will accomplish LF refurbishment. Support personnel may be provided by AFNWC/NWI if requested by the unit and approved by 20 AF/A4.

3.4.1.13. Unit QA must actively participate in maintenance training and SELM configuration to include the following:

3.4.1.13.1. Providing sufficient personnel to support the SELM test.

3.4.1.13.2. Reviewing SELM maintenance lesson plans and monitoring initial training sessions.

3.4.1.13.3. Reviewing SELM T.O.s and developing local checklists IAW AFI 21-202 and T.O. 00-5-1, *Air Force Technical Order System*.

3.4.1.13.4. Verifying SELM configuration procedures in the training LF prior to test facility deposture.

3.4.1.13.5. Observing SELM configuration activities at test LFs/LCCs and verifying configuration prior to SELM start-up.

3.4.1.13.6. Participating in “final inspections”.

3.4.2. Equipment Processing:

3.4.2.1. The MTU contains SELM equipment required for test conduct and is the vehicle used to transport SELM equipment between its various destinations. The MTUs minimize individual container handling and provide an easy means to inventory and store SELM equipment when not in use. At a test unit, the MTU will be transferred to AFGSC for duration of test activities. All equipment not in use will either remain locked in the MTU or in a secure storage area designated by the TSM.

3.4.2.2. The MIF contains equipment required to monitor and evaluate ALCS critical and non-critical commands. AFNWC/NWI will transport the MIFs to test wings and operate them as directed by the TEO and TSD.

3.4.3. SELM Equip Handling and Processing:

3.4.3.1. Use DD Form 1149 and supporting documentation for transfer of equipment from one agency to another; (e.g., AFGSC to AFNWC/NWI, AFNWC/NWI to AFGSC, etc.). Mark Block 4 of DD Form 1149 (ACCOUNTABLE TO ALC ACCOUNT 525SE - DO NOT POST).

3.4.3.2. Ship MTUs in a locked/sealed container marked "For GIANT PACE" to the maintenance squadron equipment section at each test unit. A set of keys will accompany the shipping document (DD Form 1149). The TSM's representative will receive the MTU in a locked/sealed condition.

3.4.3.3. An AFNWC/NWI representative, along with wing representatives, will jointly inventory contents of the loaded MTU to item levels. When satisfied inventories are correct, both the AFNWC/NWI representative and TSM's representative will sign a copy of the shipping document (DD Form 1149). These signatures certify the contents of each MTU shipment.

3.4.3.4. An AFNWC/NWI representative is authorized joint usage of test wing precision measurement electronics lab and electronic laboratory facilities for repair/calibration/certification as required; however, an AFNWC/NWI representative will not impact mission essential work.

3.4.3.5. Use standard work orders to accomplish installation/removal of SELM equipment issued by Plans and Scheduling. Conspicuously stamp these work orders on the face "SELM."

3.4.3.6. Upon conclusion of test activities, remove SELM equipment from the facilities, place in their proper containers, and return to TSM's representative. Place equipment in the MTU or other secure storage area.

3.4.3.7. An AFNWC/NWI representative and TSM's representative will jointly inventory all equipment when it is returned to the support base after test week. With a correct inventory, the TSM's representative will turn over MTU keys to an AFNWC/NWI representative. Both representatives will sign and date the DD Form 1149.

3.4.3.8. An AFNWC/NWI representative will prepare a new DD Form 1149, for shipping the MTU to its next destination. The maintenance squadron equipment section, upon notification, will comply with shipping instructions from AFNWC/NWI.

3.4.3.9. The test unit is responsible for lost/damaged equipment while being used for SELM. Use existing directives to seek relief from responsibility for property lost or damaged while under AFGSC control.

3.4.3.10. An AFNWC/NWI representative will ensure that action is taken to repair or replace, calibrate, and certify the SELM equipment prior to subsequent use.

3.4.3.11. The local base transportation officer will ship loaded MTUs after instructions for shipping are received from an AFNWC/NWI representative.

3.4.3.12. The 576 FLTS will ensure the UHF radio box is delivered to the next unit conducting a SELM.

3.4.4. Funding:

3.4.4.1. Non-AFGSC organizations will determine the means of internal budgeting/funding required to support this program. Expenditure of funds by AFNWC/NWI in support of SELM will be IAW provisions of applicable Minuteman program management directives. Provide on-site technical advice to HQ AFGSC and operational units during a SELM

3.4.4.2. The unit will submit funding requirements to the Program Element Monitor in support of the SELM program. ESP Code 7V will be used for all operation and maintenance funds obligated in support of the SELM program. The unit will fund all depot level reparable (DLR) cost incurred from SELM test from their unit DLR account. The TSM will submit a SELM Expense Report to HQ AFGSC/A5R listing all test expenses incurred by Element of Expense Investment Code (EEIC) within 90 days from completion of test.

3.5. Reporting:

3.5.1. Reporting is essential for effective SELM program management as well as for accurate evaluation of weapon system performance. Reporting requirements encompass two primary areas: the status of program events and detailed information following completion of each event. 576 FLTS is responsible for ensuring SELM reports are accurate and completed IAW the timelines in this instruction.

3.5.2. SELM Status Report (Attachment 10):

3.5.2.1. These are used to report the results and completion of Part I (Alert Readiness Tests), Part II (SELM Posture), and Part IV (Reposture). The TSM will transmit this report within 24 hours of completion of Part I, II, or IV.

3.5.2.2. Part I results will contain the ART results for each test sortie by test type (i.e., Enable Test, Missile Test, SCNT). The TSM and TM will score test results using the following criteria:

3.5.2.2.1. SUCCESSFUL (S). LF successfully completed designated weapon system test with no anomalies noted.

3.5.2.2.2. SUCCESSFUL WITH ANOMALY (SA). LF successfully completed designated weapon system test with any anomaly noted which will not prevent launch.

3.5.2.2.3. FAILURE (F). LF failed designated weapon system test with anomaly that would prevent launch.

3.5.2.2.4. NO TEST (NT). LF was not tested due to it being off alert at time of test or T.O. restrictions prevented specific test.

3.5.2.3. The Part II and IV reports will provide the Zulu date time group that each facility entered either SELM or EWO alert. Submit this report after the last sortie is postured to SELM alert and when the last sortie is repostured to EWO alert.

3.5.2.4. The report will be UNCLASSIFIED and must not contain any data on causes of failures or failed components. Provide a description of abnormal indications, hardware/software anomalies or test failures in a SECRET follow-up SELM Problem Report.

3.5.3. SELM Problem Report (Attachment 12):

3.5.3.1. This multipurpose report is used for resolving significant problems or reporting preliminary causes of Parts I and III anomalies and failures. The TSM will use this to report preliminary causes of failures. Classify it IAW the ICBM SCG.

3.5.3.2. The SELM Problem Report will identify test, test unit, problem site, a description of problem, T.O. in use when problem was identified, when problem occurred or was discovered, probable cause, remarks, and POC.

3.5.4. SELM Terminal Countdown Report (Attachment 13):

3.5.4.1. This is used to report results of the Part III Launch Demonstration on each of the ground and airborne test days. The TSM will coordinate with the TM and transmit each report within 12 hours following ground and airborne tests.

3.5.4.2. The report will identify commit time, method of commit, LF committed TCD time, results by increment, and POC. The TSM and TM will score test results using the following criteria:

3.5.4.2.1. SUCCESSFUL (S). Sortie successfully completed all critical commands and TCD with no anomalies noted.

3.5.4.2.2. SUCCESSFUL WITH ANOMALY (SA). LCC and LF successfully completed all critical commands and TCD with any anomaly noted that would not prevent launch or sortie successfully completed all critical commands and TCD with any anomaly noted during non-LR portion of test.

3.5.4.2.3. FAILURE (F). LCC failed to correctly process and send critical commands to test LF with anomaly that would prevent launch. LF failed to correctly process a critical command or TCD with anomaly that would prevent launch (Exception: UHF Radio Drawer failures will be scored as SAs).

3.5.4.2.4. NO TEST (NT). Sortie was not tested or test failure was caused by test equipment.

3.5.4.3. Like the SELM Status Report, this report is UNCLASSIFIED and only indicates results for each test LCC and LF. Do not identify any causes of failure or failed components. Follow up with classified SELM Problem Report and/or SELM Anomaly Analysis Report, if required.

3.5.5. SELM Anomaly Analysis Report (Attachment 14):

3.5.5.1. The TSM with 576 FLTS, TM, and "SELECT" coordination will submit this report to detail results of an AAT investigation. The report is mandatory for any countdown abort or any anomaly occurring during Part III. It is also required anytime the AAT is formed to investigate any Part I, II or IV anomaly. Classify this report IAW the ICBM SCG.

3.5.5.2. The report will identify test, unit, anomaly site, classification of anomaly, date/time of anomaly, test increment anomaly occurred, anomaly description, test synopsis, anomaly analysis, action taken, impact of indications, recommendations, conclusions, and POC.

3.5.6. SELM Performance Report:

3.5.6.1. This report is used to detail test results, configuration and conduct. Classify the report IAW the ICBM SCG. 576 FLTS will submit this report to HQ AFGSC/A3IT within 60 calendar days from the last sortie being repostured or from the last test item received. Upon request from HQ AFGSC/A3I/A3IT, any required edits will be made and the updated report submitted back to HQ AFGSC/A3IT within 48 hours.

3.5.6.2. Reports will be IAW HQ AFGSC/A3IT approved format and include an Executive Summary and cover test objectives, significant test issues, configuration, data, performance data and a recommendation for LCC/LF scoring consistent with guidance in AFI 99-103. Include as attachments the TCD Data Records and the ALCS Operational Test Summary.

3.5.7. SELM Expense Report. This report is used to detail unit expenses incurred by conducting a SELM test and forms the basis for unit reimbursement of these expenses by HQ AFGSC/A5R. The report will list all test expenses incurred by EEICs. The TSM will submit a SELM Expense Report to HQ AFGSC/A5R within 90 days from completion of test for determination of unit reimbursement.

Chapter 4

SOFTWARE OPERATIONAL TESTING

4.1. General. The Rapid Execution and Combat Targeting program modified the Minuteman III LCCs with the Weapon System Control Console (WSCC). The HAC/RMPE portion of the WSCC provides the WSCC with message processing capability, while the Weapons System Control Element and its associated COP controls all weapon system related functions. HAC/RMPE and COP SOTs ensure each new release performs to expected standards. Many factors influence the HAC/RMPE and COP software, including changes to plans, emergency requirements changes, and routine upgrades of the operating programs. Of note, this chapter specifically covers changes for HAC/RMPE and COP as required for an OPlan change, a routine operating system upgrade or as a result of an identified deficiency in the system. SOT validates these software modifications and improvements, identifies operational deficiencies, ensures proper system operation following software modification and improvement, and opportunities for enhancement.

4.2. Responsibilities:

4.2.1. HQ AFGSC/A3I will:

4.2.1.1. Chair Operations Control Board (OCB).

4.2.1.2. Ensure HAC/RMPE tests comply with Concept of Software Support (CSS).

4.2.2. HQ AFGSC/A3IA will:

4.2.2.1. Convene OCB.

4.2.3. HQ AFGSC/A3IT will:

4.2.3.1. Participate in OCB.

4.2.3.2. Provide SOT test week support.

4.2.4. HQ AFGSC/A6O will:

4.2.4.1. Function as command lead for HAC/RMPE.

4.2.4.2. Function as the office of primary responsibility for the CSS.

4.2.4.3. Provide funding for HAC/RMPE changes and program requirements.

4.2.5. 576 FLTS will:

4.2.5.1. Coordinate with HAC/RMPE Software Support Facility (HSSF) to ship Journal Memory Load disks to VAFB.

4.2.5.2. Participate in OCB and TIMs

4.2.5.3. Participate in Developmental Test and Evaluation (DT&E) events as applicable.

4.2.5.4. Develop and publish a TEO for each ICBM SOT NLT T-90 days.

4.2.6. 20 AF will:

4.2.6.1. Assign a project officer as primary point of contact for coordination and review of SOT.

4.2.6.2. Prepare and publish, as needed, implementing instructions.

4.2.6.3. Observe OT to determine if the software satisfies user requirements.

4.2.6.4. Provide Combat Mission Ready (CMR) qualified system operators for each test as outlined by the TEO. Typically, one operator from each MW will support SOT.

4.2.6.5. Determine when system operators and test personnel require training on software changes.

4.2.6.6. Coordinate live communication test message reception and transmission requests between 576 FLTS and operational units (e.g., Strategic Automated Command Control System (SACCS) messages).

4.2.7. 20 AF 625 STOS will:

4.2.7.1. Develop and transmit test-specific Force Direction Messages as requested by 576 FLTS in support of MAF checkout/test dry run and OT.

4.2.8. HQ USSTRATCOM has agreed to:

4.2.8.1. Have USSTRATCOM/J38 assign a project officer as the primary point of contact for coordination and review of SOT.

4.2.8.2. Have JFCC GS/J31, coordinate end-to-end connectivity and command and control demonstration requests with HQ AFGSC/A3IN/A3IT.

4.2.8.3. Have USSTRATCOM/J38 provide E-6B airborne communication support during live communications portion of MAF checkout/test dry run and OT.

4.2.9. AFNWC/NWI has agreed to:

4.2.9.1. Maintain and provide software test equipment, to include the Message Generator and Squadron Data Simulator.

4.2.9.2. Coordinate the schedule and changes for all DT&E events with OTO.

4.3. Testing Procedures:

4.3.1. The SOT process begins with a requirement for an OPlan change, a routine operating system upgrade or as a result of an identified deficiency in the system. The process ends with results being reported to HQ AFGSC/A3, who makes the final decision on whether the software is ready for field deployment. Normally two HAC/RMPE tests per year and one COP test per 18 months are conducted in support of modifications and implementation.

4.3.2. 576 FLTS TD is directly responsible for test accuracy and the successful execution of the TSD, which serves as SOT's detailed test procedures. For HAC/RMPE SOT, this document is separated into seven distinct parts: Live Communications testing, EAM Processing, EAM Permutations, Confidence Check procedures, Repeat Testing, New Test Requirements, and Anomaly Analysis. For COP SOT, this document is separated into five distinct parts: Critical Commands, LF Commands/Command Validity, Alarm Management and Notification, Display Functions and Anomaly Analysis. The TSD contains demand-response, step-by-step testing procedures to thoroughly test the entire software program and verify changes meet user requirements (IAW message specification matrices) without any adverse effects.

4.4. Reporting.

4.4.1. Reports (Attachments 15 and 16). 576 FLTS will provide initial reports following each SOT. A signed initial test results notification message ("Quick Look") is submitted within 12 hours of test completion. This report includes test activities, initial results and an explanation for test activities not conducted. If an anomaly occurs/is confirmed, an anomaly analysis report (Attachment 21) is released in message format as soon as practical.

4.4.2. Performance Report:

4.4.2.1. The Performance Report is used to detail test results, configuration and conduct. 576 FLTS will submit this report to HQ AFGSC/A3 as detailed in Chapter 1 of this instruction.

4.4.2.2. Classify the report IAW the ICBM SCG. Reports will be IAW HQ AFGSC/A3IT approved format and include an Executive Summary and cover test objectives, significant test issues, configuration, data, performance data, anomalies, suggestions for improvements and a fielding recommendation. All findings will be reported in detail, consistent with guidance in AFI 99-103, to include an assessment of impact to the fielded force. Recommendations will be given for urgency of corrective actions (e.g. emergency or routine T.O. change). Upon request from HQ AFGSC/A3I/A3IT, any required edits will be made and the updated report submitted back to HQ AFGSC/A3IT within 48 hours.

4.5. Identifying Anomalies, Improvements and Revisions: Identifying anomalies, improvements, and revisions will be accomplished IAW the CSS.

4.6. Validating, Prioritizing and Forwarding AF Form 1067s, Modification Proposal: AF Form 1067s will be validated, prioritized and forwarded by the OCB.

4.7. HAC/RMPE Software Change Overall Response Times: The CSS outlines software and software change response times, to include urgent and emergency SOTs.

Chapter 5

WEAPON SYSTEM TESTS

5.1. General. The alert readiness of deployed ICBMs is verified by WSTs, which include OLYMPIC PLAY tests, GIANT BALL tests and SMIC testing.

5.2. OLYMPIC PLAY. The OLYMPIC PLAY program provides valuable launch reliability data used to develop planning factors and in Ogden ALC's Weapon System Aging Surveillance Program. OLYMPIC PLAYs allow AFGSC to test ICBM weapon systems in their deployed environment without breaking operational configuration to install test equipment or instrumentation.

5.2.1. Responsibilities:

5.2.1.1. HQ AFGSC will:

5.2.1.1.1. Serve as the overall manager of the OLYMPIC PLAY program.

5.2.1.2. HQ AFGSC/A3IN will:

5.2.1.2.1. Review test results for use as appropriate to develop the estimate of weapon system reliability for planning.

5.2.1.2.2. Review test results at the Reliability Scoring Panel (RSP) to identify specific missile and launch support equipment failures, identifies corrective actions, and detect trends which could impact future WSR rates.

5.2.1.3. HQ AFGSC/A3IT will:

5.2.1.3.1. Provide policy, guidance and oversight for the OLYMPIC PLAY program.

5.2.1.4. 576 FLTS will:

5.2.1.4.1. Ensure 576 FLTS/TEMA accomplishes reporting for OLYMPIC PLAY testing.

5.2.1.4.2. Coordinate and implement OLYMPIC PLAY policy and procedures.

5.2.1.4.3. Ensure 576 FLTS/TEMA collects and reviews operational unit OLYMPIC PLAY test results and Sortie Effectiveness Reports for accuracy, completeness and timeliness.

5.2.1.4.4. Ensure 576 FLTS/TEMA appoints an OLYMPIC PLAY Monitor and Alternate as the single point of contact for OLYMPIC PLAY matters. Notify HQ AFGSC/A3IT/A4M, 20 AF, and operational units of these appointments. Include in notification: name, grade, office symbol, and duty phone number.

5.2.1.4.5. Publish OLYMPIC PLAY Quarterly Reports as directed by this instruction.

5.2.1.5. 20 AF will:

5.2.1.5.1. Assist the operational units with OLYMPIC PLAY reporting and review the reports for accuracy, completeness and timeliness.

5.2.1.5.2. Appoint an OLYMPIC PLAY Monitor and Alternate as single points of contact for OLYMPIC PLAY matters. Notify HQ AFGSC/A3IT/A4M, 576 FLTS,

and subordinate operational units of these appointments. Include in notification: name, grade, office symbol, and duty phone number.

5.2.1.6. Missile Wings (90 MW, 91 MW, and 341 MW) will:

5.2.1.6.1. Schedule OLYMPIC PLAY tests in conjunction with T.O. 21M-LGM30F-6, *Scheduled Inspection and Maintenance Requirements – Missile Weapons Systems***,** T.O. requirements. As a minimum, an OLYMPIC PLAY test will be scheduled and conducted once a month for each missile squadron. The unit publishes test schedules in weekly operations and maintenance schedule/plan. No-notice OLYMPIC PLAY tests conducted as a result of HQ AFGSC, 20 AF, or unit commander direction can be used as the normal scheduled monthly OLYMPIC PLAY test.

5.2.1.6.2. Conduct OLYMPIC PLAY tests according to WSSRs, current AFGSC safety directives, appropriate T.O.s, and this instruction.

5.2.1.6.3. Train MCCM on OLYMPIC PLAY procedures.

5.2.1.6.4. Develop procedures to ensure OLYMPIC PLAY tests are conducted in a minimum of time consistent with safety and existing operating priorities.

5.2.1.6.5. Report results of OLYMPIC PLAY tests as directed by this policy and guidance. Report results of all scheduled and no-notice (i.e., HQ AFGSC/IG, 20 AF/CCE) OLYMPIC PLAY tests to 576 FLTS/TEMA.

5.2.1.6.6. Appoint a primary and alternate OLYMPIC PLAY monitor as single point of contact for OLYMPIC PLAY matters. Notify HQ AFGSC/A3IT/A4M, 20 AF, and 576 FLTS of these appointments. Include in notification: name, grade, office symbol, and duty phone numbers. OLYMPIC PLAY monitors must be knowledgeable of test requirements, reporting procedures and have access to this policy and guidance. The OLYMPIC PLAY monitor is responsible for the following:

5.2.1.6.6.1. Schedule and conduct OLYMPIC PLAY tests as required by this instruction.

5.2.1.6.6.2. Coordinate with unit technical engineering to determine appropriate LF scoring following any OLYMPIC PLAY anomaly. LFs will be scored according to rules in OLYMPIC PLAY Reporting Section of this instruction.

5.2.1.6.6.3. Submit OLYMPIC PLAY Results Report within three duty days of test completion.

5.2.1.6.6.4. Ensure unit technical engineering accomplishes OLYMPIC PLAY Sortie Effectiveness Reports within five duty days from resolution of the anomaly for all anomalies occurring during OLYMPIC PLAY tests.

5.2.1.6.6.5. Maintain file copies of all OLYMPIC PLAY test results until receipt of the OLYMPIC PLAY Quarterly Report for that period.

5.2.1.7. AFNWC/NWI has agreed to:

5.2.1.7.1. Provide Technical Engineering support to the MW.

5.2.1.7.2. Conduct an analysis of each OLYMPIC PLAY anomaly. Technical engineering will submit a Sortie Effectiveness Report to 576 FLTS/TEMA with copies to HQ AFGSC/A3IT/A4M, 20 AF/A4MO and 576 FLTS detailing anomaly

analysis results within 5 workdays of a LF being returned to alert or resolution of anomaly

5.2.2. Procedures:

5.2.2.1. Units must conduct OLYMPIC PLAY tests once a month for each missile squadron. The tests may be scheduled or no-notice.

5.2.2.2. If a no-notice OLYMPIC PLAY is conducted prior to the scheduled OLYMPIC PLAY, the unit has the option of conducting the scheduled OLYMPIC PLAY. (***Note***: At least one test must be accomplished each month to each missile squadron.)

5.2.2.3. HQ AFGSC, 20 AF, or unit commanders may initiate no-notice OLYMPIC PLAY tests.

5.2.3. Test Conduct:

5.2.3.1. An OLYMPIC PLAY Test Initiation Message will initiate OLYMPIC PLAY tests. In place of OLYMPIC PLAY Test Initiation Messages, MCC may perform OLYMPIC PLAY when directed by WCP in conjunction with a valid authentication.

5.2.3.2. OLYMPIC PLAY Test Initiation Messages will be transmitted clear text by any means available. Test Initiation Messages may be addressed to wings, groups, squadrons, flights, individual missiles, or a combination thereof. The message will contain appropriate addressing, test identifier (OLYMPIC PLAY), a reference time and authentication.

5.2.3.3. The OLYMPIC PLAY Test Initiation Message authorizes missile combat crews to conduct an OLYMPIC PLAY test.

5.2.3.4. Only mission ready MCCMs may perform weapon system tests during an OLYMPIC PLAY test.

5.2.3.5. The unit conducts an OLYMPIC PLAY test by performing weapon system tests, interrogations, and commands listed in Attachment 17. Unless required by T.O. or safety constraints, the sequence of testing may be determined locally. For scoring purposes, the test consists of only interrogations, commands, and responses and does not include any time between test segments.

5.2.3.6. Initiate all required weapon system tests, interrogations, and commands to each LF on alert at test initiation. Conduct the OLYMPIC PLAY test with minimum delay consistent with existing operating priorities.

5.2.3.7. Do not remove LFs from alert after test initiation unless the LF is exempted by paragraph 5.2.4 below, until after test is complete.

5.2.3.8. Conduct all OLYMPIC PLAY activities according to existing nuclear WSSRs, current AFGSC safety directives, appropriate T.O.s, and this instruction.

5.2.3.9. A sortie which is undergoing active maintenance but not listed as an exemption will be tested in accordance with applicable directives. Remaining tests will be conducted upon maintenance completion.

5.2.4. Test Exemptions:

5.2.4.1. LFs with missile, ground support equipment or real property installed equipment undergoing:

5.2.4.1.1. Major modifications.

5.2.4.1.2. Engineering change proposals.

5.2.4.1.3. Time compliance T.O. changes.

5.2.4.1.4. Master change log modifications affecting alert status.

5.2.4.2. LFs identified for OTL, SELM, or special ground tests.

5.2.4.3. LFs being reported as "F" or "L" category codes in the Missile Sortie Status Report at test initiation.

5.2.4.4. LFs scheduled for retargeting if OLYMPIC PLAY testing will delay completion of retargeting actions until after effective time listed in the JPIC for each LF.

5.2.4.5. LFs returned to alert after reference time specified in the Test Initiation Message.

5.2.5. Reporting:

5.2.5.1. OLYMPIC PLAY Results Report (Attachment 18).

5.2.5.1.1. The operational unit OLYMPIC PLAY monitor submits this report to 576 FLTS/TEMA with copies to HQ AFGSC/A3IT/A4M and 20 AF/A4M within three duty days of test completion.

5.2.5.1.2. The report summarizes results of a single squadron's OLYMPIC PLAY test. The report will identify squadron tested, date time group test was started, number of LFs tested, the number of LFs scored successful, successful with anomalies, total successful, failures, and no-tests, identification and explanation of why LFs were scored successful with anomalies, failures and no-tests, and POC for the report.

5.2.5.1.3. Consult technical engineering for technical opinion on LF effectiveness whenever an anomaly occurs during an OLYMPIC PLAY test. Scoring will only be accomplished for responses that can be attributed to OLYMPIC PLAY commands or interrogations. Unrelated responses that are coincidental in timing (a power transfer that causes a burnt motor generator, for example) will not result in sortie failure and will not be considered a part of OLYMPIC PLAY test. A sortie will be scored based on the initial response to a command or interrogation regardless of responses to subsequent fault flow actions. Any sortie that exhibits intermittent faults during OLYMPIC PLAY tests will be deemed intermittent and scored accordingly during each OLYMPIC PLAY test. Score each LF using the following criteria:

5.2.5.1.3.1. SUCCESSFUL (S). LF successfully completed OLYMPIC PLAY with no anomalies noted.

5.2.5.1.3.2. SUCCESSFUL WITH ANOMALY (SA). LF successfully completed OLYMPIC PLAY with an anomaly noted which would not prevent launch.

5.2.5.1.3.3. FAILURE (F). LF failed OLYMPIC PLAY with an anomaly that would prevent launch. (e.g., MCC actions caused LF to fail a portion of the test preventing the launch of a launch capable LF; such actions would include LFs with incorrect target verification response, computer memory verification check

for any target or current execution plan case.)

5.2.5.1.3.4. NO TEST (NT). LF was not tested.

5.2.5.2. OLYMPIC PLAY Sortie Effectiveness Report (Attachment 19):

5.2.5.2.1. Operational unit technical engineering has agreed to submit this report to 576 FLTS/TEMA with copies to HQ AFGSC/A3IT/A4M and 20 AF/A4M within five duty days of the LF being returned to alert or resolution of anomaly. Each missile wing will ensure this report has been submitted.

5.2.5.2.2. The report details results of anomaly analysis conducted for each OLYMPIC PLAY anomaly. Reports should detail fault description, corrective action, LF history, recommended scoring, and POC. Technical engineering will use the scoring criteria in paragraph 5.2.5.1.

5.2.5.3. OLYMPIC PLAY Quarterly Report (Attachment 20):

5.2.5.3.1. 576 FLTS/TEMA will publish this report and forward copies to HQ AFGSC/HO/A4M/A3IT/A3IN/SEW, USSTRATCOM/J38 and JFCC GS/J31, 20 AF/A3/A4, AFNWC/NWIEI, and operational units within 15 duty days after completion of a fiscal year quarter.

5.2.5.3.2. This report compiles results of all OLYMPIC PLAY tests for a given quarter. Reports will detail by operational unit and weapon system the number of LFs tested, number of LFs scored successful, successful with anomaly, total success (total LFs scored "S" and "SA"), failures, and the ratio of total successful LFs over total LFs tested. Also, the report will detail each failure or anomaly by operational unit to include LF identifier, Zulu date time group test began, fault/anomaly description, and corrective action taken.

5.3. GIANT BALL Testing. GIANT BALL missions test UHF radios at the LCCs and LFs at each missile base and onboard the ALCS. 20 AF/A3 tracks reports from 625 STOS and deficiencies for Air Force equipment. Deficiencies identified with aircraft communications equipment are tracked by the United States Navy.

5.3.1. Responsibilities:

5.3.1.1. HQ AFGSC/A3IA will:

5.3.1.1.1. Conduct overall management of the GIANT BALL test program.

5.3.1.1.2. Review and analyze test results for use as appropriate.

5.3.1.2. 20 AF 625 STOS will:

5.3.1.2.1. Coordinate GIANT BALL dates, times, and crew lists with appropriate agencies, deconflicting with ICBM Test Forecast and aircraft/aircrew limitations. 625 STOS is the tasking authority for AFGSC.

5.3.1.2.2. Provide an ALCS Operational Test Summary with test command sequence, an ALCS Operational Test Summary (Preformat) for transmitter verifications, and planning and preparation for test, as appropriate.

5.3.1.2.3. Provide ALCS information messages, as appropriate, and provide input to the scheduling of the mission.

5.3.2. Test Procedures. Launch Facility Radio Tests (LFRT) are sent to each LF, with a repeat test to each squadron that had exceptions to the first test. A UHF voice communication poll is conducted simultaneously with the LFRT, establishing voice communications with each of the LCCs.

5.3.2.1. The test missions normally involve all three missile bases and are flown twice per month.

5.4. Hardness Surveillance Electromagnetic Pulse (EMP) Program (HSEP) Testing. In accordance with AFPD 63-1/ AFPD 20-1, *Acquisition and Sustainment Life Cycle Management* HSEP conducts the EMP hardness evaluation of the MM III ICBM system. HSEP testing is conducted in accordance with this instruction and 526 ICBMSW Operating Instruction 99-01, *Hardness Surveillance*.

5.4.1. Responsibilities:

5.4.1.1. HQ AFGSC/A3 will:

5.4.1.1.1. Approve Implementation Management Plan for all HSEP testing.

5.4.1.2. HQ AFGSC/A3I will:

5.4.1.2.1. Participate with AFNWC/NWI in anomaly/failure analysis to include resolving test related problems.

5.4.1.3. HQ AFGSC/A3IN will:

5.4.1.3.1. Coordinate with USSTRATCOM/J8 on anomalies, discrepancies, and degrades discovered by HSEP.

5.4.1.3.2. Review test results at the RSP.

5.4.1.4. HQ AFGSC/A3IT will:

5.4.1.4.1. Coordinate on Implementation Management Plan for all HSEP testing.

5.4.1.4.2. Coordinate with AFNWC/NWI before authorizing testing of misconfigured systems that may lead to equipment damage. HQ AFGSC/A3IT is the final authority to approve testing of misconfigured sites.

5.4.1.5. 20 AF will:

5.4.1.5.1. Provide LFs and MAFs at missile wings for HSEP testing, normally based on a minimum of seven LFs and two MAFs.

5.4.1.6. AFNWC/NWI has agreed to:

5.4.1.6.1. Function as the lead command and provide an AFNWC/NWI Single Manager (Host Wing Rivet Mile) at the host missile wing.

5.4.1.6.2. Function as the focal point for coordinating among all agencies and have responsibility for all test activities.

5.4.1.6.3. Provide contractor interface with the host missile wing.

5.4.1.6.4. Monitor all phases of the work effort related to HSEP.

5.4.1.6.5. Ensure AFNWC/NWI Single Manager monitors the General Dynamics (GD) safety program, which includes nuclear system safety and personnel safety during the technical activity.

5.4.1.6.6. Provide support services for this testing.

5.4.1.6.7. Provide Government Furnished Equipment (GFE) as defined in the contract.

5.4.1.6.8. Monitor performance of the tests to insure the adequacy of the system configuration control.

5.4.1.6.9. Coordinate with HQ AFGSC/A3IT and host wing staff before authorizing testing of misconfigured systems that may lead to equipment damage. HQ AFGSC/A3IT is the final authority to approve testing of misconfigured sites.

5.4.1.6.10. Provide program findings to the ICBM Prime Integration Contract team, which in turn will provide data analysis and assessment to interpret trends within the weapon system.

5.4.1.6.11. Provide selected HSEP sites to HQ AFGSC/A3IT NLT 1 August of the year preceding test for inclusion in the ICBM Test Forecast (e.g. 2012 test sites will be provided to HQ AFGSC/A3IT NLT 1 Aug 2011).

5.4.1.7. Missile Wings (90 MW, 91 MW, 341 MW) will:

5.4.1.7.1. Deposture and isolate the test LFs/MAFs in accordance with the applicable Deposture/Reposture procedures.

5.4.1.7.2. Prepare for Hardened Intersite Cable (HIC) separation.

5.4.1.7.3. Emplace the HIC extension cable.

5.4.1.7.4. Sever the HIC with the LF end terminated using a HIC extension cable and the MAF end terminated in the Electrical Surge Arrester Coffin.

5.4.1.7.5. Restore the HIC Pressure System as necessary.

5.4.1.7.6. Deliver the depostured LFs/MAFs through AFNWC/NWI Single Manager to GD on the Transfer Form DD 1149.

5.4.1.7.7. Perform Operational Ground Equipment (OGE), Maintenance Ground Equipment and RPIE maintenance at the test LFs/MAFs as required to support the test program.

5.4.1.7.8. Provide Disaster Control response in accordance with the Base OPlan, when requested by AFNWC/NWI Single Manager. Support includes a Disaster Control Group Commander.

5.4.1.7.9. Appoint the PRP monitor/certifying official for the HSEP contractor.

5.4.1.7.10. Be responsible for on-site safety, Two-Person Concept control, and site security before site acceptance by AFNWC/NWI and after return to host missile wing.

5.4.1.7.11. Provide services and facilities in accordance with the base and missile wing support agreements.

5.4.1.7.12. Reposture the LFs and MAFs and restore the HIC in accordance with the applicable Deposture/Reposture procedures.

5.4.1.7.13. Perform checkouts of operational and pre-instrumented drawers.

5.4.1.7.14. Perform checkouts of some subset of the following drawers after EMP tests.

5.4.1.7.15. If requested by AFNWC/NWI, perform mishap/accident/incident investigation and reporting IAW AFI 91-204 requirements when notified by GD or AFNWC/NWI Program Manager.

5.4.1.7.16. Provide three intra-group fifth-wheel tractors and drivers for transportation of the High Energy Pulse (HEP), Office Trailer, and Van 10.

5.4.1.7.17. GD-Ogden HSEP Program Manager Responsibilities

5.4.1.7.18. Adhere to this plan in accomplishing the technical activity.

5.4.1.7.19. Manage the test being conducted and provide a Technical Director.

5.4.1.7.20. Provide AFNWC/NWI Single Manager with a designated on-site representative for safety and security.

5.4.1.7.21. Designate the Site Supervisor as the Emergency Rescue Team Chief (ERTC) who will be trained in rendering first aid and in evacuation of incapacitated personnel.

5.4.1.7.22. Provide safety, security, fire protection, housekeeping, and sanitation in support of the on-site HSEP test activities.

5.4.1.7.23. Provide the procedures, personnel, and equipment to assure evacuation of incapacitated personnel if needed.

5.4.1.7.24. Prepare and maintain documents, drawings, and reports for HSEP activities.

5.4.1.7.25. Emplace, install, and maintain the equipment vans, site trailers, site communication system, test instrumentation, and recording systems.

5.4.1.7.26. Perform data acquisition, data handling, and processing as required for quick look evaluation of test results.

5.4.1.7.27. Provide a general HSEP safety briefing for personnel assigned to work at the site and to site visitors. This briefing may be given on site. All site personnel shall receive safety instructions pertaining to their daily assignments.

5.4.1.7.28. Ensure that changes to the preplanned test effort are coordinated with the AFNWC/NWI.

5.4.1.7.29. Single Manager or designated representative.

5.4.1.7.30. Provide support for mishap investigation as requested by the AFNWC/NWI Single Manager.

5.4.1.7.31. Perform drawer instrumentation and visual inspections in accordance with electro-static discharge (ESD) requirements contained in T.O. 00-25-234, *General Shop Practice Requirements for the Repair, Maint and Test of Electrical Equip (ATOS)* and T.O. 21M –LGM30G-2-10, *Launch Facility and Support Building Procedures (VAFB, Wing 1, III, and V Integrated Program), USAF Series LGM30G Missile*.

5.4.1.7.32. Maintain Two-Person Concept, Nuclear Weapons PRP, and COMSEC control in areas declared no-lone zones and all areas where critical components exist. Be responsible for providing weapon system security as well as establishing and maintaining controls. These procedures are detailed in HSEP Personnel Reliability Program Implementation Plan, which complies with AFI 91-105, *Critical Components* and DOD 5210.42-R, *Nuclear Weapons Personnel Reliability Program.* .

5.4.1.7.33. Immediately report all mishaps, security, no-lone zone, Two-Person Concept violations, and site anomalies to AFNWC/NWI HSEP Manager.

5.4.1.7.34. Perform tasks in compliance with federal, state, and local environmental laws, as well as Air Force environmental policies and regulations.

5.4.1.7.35. Be responsible for Joint Services Interior Intrusion Detection System installation and checkout and respond to alarms during site occupancy.

5.4.2. Test Procedures:

5.4.2.1. HSEP consists of hardness evaluation of LFs and MAFs to determine system hardness status and project future system hardness.

5.4.2.2. HSEP is capable of testing 3 different environments: High Altitude EMP (HEMP), Source Region EMP (SREMP) from near neighbor attack and SREMP from direct attack.

5.4.2.3. Sites are first inspected for damaged or misconfigured critical components designed to protect the system.

5.4.2.4. Some operational drawers are removed and instrumented drawers are installed.

5.4.2.5. The team then directly injects EMPs into the system while it performs simulated operational functions including terminal countdown and launch.

5.4.2.6. Results are analyzed and acted upon by the ICBM System Program Office and reported to AFGSC.

5.4.2.7. HSEP also performs the system level EMP testing for new electronic upgrades (including CE upgrades) at no cost to the upgrade program.

Chapter 6

OTHER OPERATIONAL TESTING

6.1. General. Modifications and upgrades to the MM III weapon system and support equipment help ensure the weapon system continues to meet warfighter requirements. IAW AFI 99-103 and AFI 99-103_AFGSC SUP, operational testing outside the scope of OTL, SELM, SOT and WST is conducted to assess the operational effectiveness and suitability of the SUT and is used to inform decision makers prior to production or fielding decisions. Ultimately, operational testing ensures the Minuteman III weapon system maintains an extremely high degree of system health as it progresses through its lifecycle.

6.2. Testing Procedures:

6.2.1. All operational tests will be incorporated into the ICBM Test Forecast after the appropriate level of test effort is determined by HQ AFGSC/A3. This decision is based on system specifications and fielding requirements as outlined in AFI 99-103_AFGSC SUP. Once HQ AFGSC/A3 determines the appropriate level of test effort, a Test Screening Document will be sent from HQ AFGSC/A3IT to the OTO IAW AFI 99-103_AFGSC SUP to ascertain required resource support. The OTO will provide a rough order of magnitude that will route through HQ AFGSC/A3IT to the Program Office to ensure all test resource requirements are met. After testing concludes, the process ends with results being reported to HQ AFGSC/A3.

6.2.1.1. OTOs may use one of the following assessment or evaluation methods to conduct operational testing: Force Development Evaluation (FDE), Tactics Development and Evaluation (TD&E), OUE, OA or Early Operational Assessment (EOA). Additionally, a Sufficiency of Operational Test Review (SOTR) may be used as outlined in AFI 99-103.

6.2.1.2. All minor modification programs (i.e. Air Force Form 1067 modifications, etc.) require operational testing and are covered by this instruction and AFI 99-103. The overarching principles of integrated testing must be complied with.

6.2.2. The OTO is directly responsible for test accuracy and the successful execution of the test. Test procedures will be based on the system's capability document(s); ultimately supporting Measures of Effectiveness and Suitability to answer the COIs identified in the TP. Test procedures are used to thoroughly test the entire SUT and verify changes meet user requirements without any adverse effects to the SUT or system of systems.

6.3. Reporting.

6.3.1. Quick Look Report. The OTO will provide initial reports following each OT. An initial test result notification message ("Quick Look") will be submitted within 12 hours of test completion (unless specified differently in the TP due to specific testing requirements). This report includes test activities, initial results and an explanation for test activities not conducted. Classify the report IAW the ICBM SCG. If an anomaly occurs/is confirmed, an anomaly analysis report (Attachment 21) is released in message format as soon as practical.

6.3.2. Performance Report:

6.3.2.1. As required by AFI 99-103, this report must address each of the COIs, the system's operational effectiveness, suitability, additional information on operational

capabilities, and include an assessment of operational mission impacts. These reports must strike the proper balance between system ca-pabilities and limitations while taking into account how well the system performed mission essential tasks. When appropriate, a production or fielding recommendation may be included for OUE and FDE final reports. All Category I DRs and the top 10 Category II DRs will be listed. Detailed technical information should be published in separate data documents. The OTO will submit this report to HQ AFGSC/A3 as detailed in Chapter 1 of this instruction.

6.3.2.2. Classify the report IAW the ICBM SCG. Reports will be IAW HQ AFGSC/A3IT approved format and include an Executive Summary and cover test objectives, significant test issues, configuration, data, performance data, anomalies, suggestions for improvements and a fielding/production recommendation consistent with guidance in AFI 99-103. Upon request from HQ AFGSC/A3I/A3IT, any required edits will be made and the updated report submitted back to HQ AFGSC/A3IT within 48 hours.

Chapter 7

FORMS

7.1. Adopted

7.1.1. DD Form 1149, *Requisition and Invoice/Shipping Document*

7.1.2. AF Form 504, *Weapons Custody Transfer Document*

7.1.3. AF Form 1067, *Modification Proposal*

7.1.4. AFCOMSEC Form 9, *Cryptographic Access Certificate*

TIMOTHY M. RAY, Brigadier General, USAF
Director of Operations

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

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Abbreviations and Acronyms

AAMT—anomaly analysis management team

AAT—anomaly analysis team

AF—Air Force

AFB—Air Force Base

AFI—Air Force Instruction

AFMC—Air Force Material Command

AFPD—Air Force Policy Directive

AFGSC—Air Force Global Strike Command

AFGSCI—Air Force Global Strike Command Instruction

AFNWC—Air Force Nuclear Weapons Center

AFTO—Air Force technical order

AFSPCI—Air Force Space Command Instruction

ALC—Air Logistics Center

ALCS—airborne launch control system

ART—alert readiness test

AVE—aerospace vehicle equipment

C3—command, control and communications

CAT—Category

CC—Commander

CDRUSSTRATCOM—Commander, United States Strategic Command

CEIU—Communication Equipment Interface Unit

CEP—circular error probable

CMR—Combat Mission Ready

COI—Critical Operational Issue

COLA—collision avoidance

COP—Console Operating Program

COMSEC—Communications Security

CRR—Component Replacement Request

CSS—Concept of Software Support

DLR—depot level repairable

DoD—Department of Defense

DoDD—Department of Defense Directive

DOE—Department of Energy

DTG—date time group

DTRA—Defense Threat Reduction Agency

EAM—emergency action message

EAP—emergency action procedures

EEIC—element of expense investment code

EMP—electromagnetic pulse

EMT—Electro Mechanical Team

EOA—Early Operational Assessment

ERRC—expendable, repairable, recoverable cost designator

ERT—emergency response team

ERTC—Emergency Rescue Team Chief

ESD—Electro Static Discharge

ESP—Emergency and Special Program

ETA—estimated time of arrival

EWO—emergency war order

FDE—force development evaluation

FLTS—Flight Test Squadron

FTPM—Flight Test Planning Meeting

FWA—Flight Worthiness Assessment

GBL—government bill of lading

GD—General Dynamics

GMR—ground maintenance response

GS—Global Strike

GST—ground system test

HAC/RMPE—Higher Authority Communications/Rapid Message Processing Element

HAMS—hardness assurance maintenance, and surveillance

HEMP—high altitude electromagnetic pulse

HEP—high energy pulse

HIC—hardened intersite cable

HQ—Headquarters

HSEP—hardness surveillance electromagnetic pulse program

IAW—in accordance with

ICBM—intercontinental ballistic missile

IMU—inertial measurement unit

JFCC—Joint Functional Component Command

JPIC—joint plans interim change

KMISS—Kwajalein Missile Impact Scoring System

LAG—Launch Analysis Group

LART—Launch Anomaly Response Team

LCC—launch control center

LD—launch director

LDA—Launch Decision Authority

LF—launch facility

LFRT—Launch Facility Radio Test

LIDSS—Livermore Independent Diagnostic Scoring System

LR—launch reliability

LRR—Launch Readiness Review

MAF—missile alert facility

MAJCOM—Major Command

MC—mission certification

MCC—missile combat crew

MCC—A—missile combat crew-airborne

MCCM—missile combat crew member

MD—mission director

MGS—missile guidance set

MIF—mobile instrumentation facility

MM—Minuteman

MM III—Minuteman III

MMOC—missile maintenance operations center

MMT—missile maintenance team

MOE—Measure of Effectiveness

MOS—Measure of Suitability

MPHT—missile potential hazard team

MTMC—Military Traffic Management Command

MTU—mobile test unit

MUMG—Munitions Maintenance Group

MW—Missile Wing

NCOIC—non-commissioned officer in charge

NLT—no later than

NNSA—National Nuclear Security Administration

OA—Operational Assessment

OCB—Operations Control Board

OGE—operational ground equipment

OIC—officer in charge

OGV—Standardization and Evaluation Office

OPlan—operational plan

OPR—office of primary responsibility

OR—operational requirements

OSK—Emergency War Order Office

OTL—operational test launch

OTO—operational test organization

OUE—Operational Utility Evaluation

PADS—Performance Assessment Data System

PBV—post boost vehicle

PEO—program executive officer

PLC—A—preparatory launch command-A

POC—point of contact

PRD—Program Requirements Document

PRP—personnel reliability program

PSRE—propulsion system rocket engine

QA—quality assurance

QRM—quick reaction maintenance

RDS—records disposition schedule

REPSHIP—report of shipment

RPIE— real property installed equipment

RS—reentry system

RSP—Reliability Scoring Panel

RV—reentry vehicle

SACCS—Strategic Automated Command Control System

SCG—Security Classification/Declassification Guide

SCNT—sensitive command network test

SCS—safety control switch

SDS—squadron data simulator

SE—Safety Office

SELM—simulated electronic launch

"SELECT"— AFNWC/NWIEI System Engineering Level Evaluation and Correction Team

SIB—Safety Investigation Board

SMC—Space and Missile Systems Center

SMIC—Strategic Missile Integration Complex

SOT—software operational test

SOTR—Sufficiency of Operational Test Review

SPM—System Program Manager

SREMP—source region electromagnetic pulse

SRR—Squadron Readiness Review

START—Strategic Arms Reduction Treaty

SUT—system under test

SW—Space Wing

TC—A—Test Conductor - Airborne

TCD—terminal countdown

TCTO—time compliance technical orders

TD—test director

TEO—test execution order

TET—test evaluation team

TF—task force

TIM—Technical Interchange Meeting

TM—test manager

TM—A—test manager advisor

TMO—traffic management office

TO—test order

T.O.—technical order

TP—test plan

TRRB—Test Readiness Review Board

TSD—test sequence document

TSM—Test Support Manager

UDS—Universal Documentation System

UHF—ultra high frequency

USSTRATCOM—United States Strategic Command

VAFB—Vandenberg AFB, CA

WSCC—Weapon System Control Console

WSR—weapon system reliability

WSSR—Weapon System Safety Rule

WST—weapon system test

Terms

Accuracy—By definition, circular error probable (CEP) is the radius of a circle centered on the target, where the probability of a score inside the circle is 50%. The radial miss should be no more than 3 1/2 times the CEP; any impact score beyond this amount is considered a reliability failure and is therefore not recorded in the accuracy database. The accuracy database is cumulative and is maintained by HQ AFGSC/A3IN.

Anomaly Analysis Team (AAT) (SELM)—An interdisciplinary, ad hoc group convened to investigate and determine the anomaly/failure for failure to achieve test objectives due to hardware/software anomalies, for countdown aborts or for significant anomalies occurring during Part III (SELM Launch Demonstration).

Component Replacement Request (CRR)—Used to obtain permission to replace selected operational equipment items that do not meet T.O. requirements.

EWO Configured Missile—An alert missile and war reserve reentry system at an operational LF.

Flight Worthiness Assessment (FWA)—Used to obtain engineering assessment of component's ability to perform nominally for use during a test.

Launch Analysis Group (LAG)—An interdisciplinary, ad hoc group convened to investigate and determine the cause of AFGSC OTL anomalies which do not fall under the missile mishap criteria IAW AFI 91-204, *Safety Investigations and Reports* and AFI 91-204_AFGSCSUP.

OTL Alert Readiness—Period after which the weapon system, except for VAFB-unique items such as range safety systems, have been checked and determined ready for launch. Alert readiness begins at the completion of startup testing (Missile Test and Enable Test) and required Remote Data Change.

OTL Configured Missile—An operational missile with an OTL RS and the required range instrumentation and safety equipment.

OTL Identifier—HQ AFGSC will use the unclassified nickname "GLORY TRIP" combined with a sequential flight test number and weapon system identifier (for example "GLORY TRIP XXX") to identify a specified OTL mission. OTL Weapon System Identifiers: Minuteman III GM (WS-133A-M/LGM30G).

OTL Launch Director (LD)—Directs range user, instrumentation checkout, countdowns and integrates receipt-through-launch operations and maintenance tasks; serves as the primary point for coordination between the TMs, TF/CC and all VAFB agencies.

OTL Reentry Vehicle/Reentry System (RS/RV)—RS/RV components assembled with non-nuclear devices as designated in the TEO. The RS includes the shroud, deployment module and non-nuclear MK21, MK12, MK12A reentry vehicles.

OTL Test Manager (TM)—Manages and controls test activities at VAFB and serves as the focal point for coordination between outside agencies; during launch countdown, controls the overall test and ensures adequate sensor coverage to meet test objectives; the TM submits the final Performance Report.

Reliability—Weapon system reliability (WSR) for ICBMs is a product of launch reliability, powered flight reliability, missile guidance set reliability, reentry vehicle reliability, and warhead (including impact) reliability. For a given ICBM weapon system, the established goal for WSR is found in the applicable Operations Requirement Document. This report is published by HQ AFGSC/A5R and is classified SECRET. The WSR estimate is cumulative and HQ AFGSC/A3IN maintains the database.

SELM Test Manager (TM)—Advises and assists the SELM TSM for the following: preparation of the TSD; approval of all unit SELM lesson plans; directing SELM isolation verification and countdown activities. Submits the final Performance Report.

Squadron Data Simulator (SDS)—The SDS is an electronic duplication of an entire missile squadron. It allows for maximum simulation of equipment and environment found in an operational missile squadron.

Software Operational Test (SOT) Test Director (TD)—Produces the TSD for SOT activities; responsible for programming of the Message Generator to support testing; senior member and single point of contact for the test team.; manages and controls test execution; assists the VIGILANT VANGUARD Test Manager in writing the preliminary and final test reports.

Software Operational Test (SOT) Test Manager—Manages and controls SOT test activities at VAFB and serves as the single point of contact for coordination between involved parties; interprets test results and writes preliminary and final test reports.

Strategic Missile Integration Complex (SMIC)—The SMIC uses operationally configured LFs that are connected to operationally configured LCCs and squadron data simulators. Testing can be accomplished under operationally realistic conditions without disruption of alert forces or the risk of nuclear surety issues.

Test Conductor—Airborne—A technical advisor provided by 625 STOS/OSO, aboard the test aircraft, to coordinate ALCS activities.

Test Execution Order (TEO)—Test specific tasking notification issued by 576 FLTS. Each TEO contains mission specific requirements and responsibilities, which must be accomplished to ensure mission success.

Test Order (TO)—A formal tasking document issued by HQ AFGSC/A3I that outlines the background and purpose of the test, its objective and scope, responsibilities, physical, material, financial, personnel, priority and reporting requirements. Supplementing information may be documented in a TO Annex.

Test Plan (TP)—A formal document produced by the OTO providing the complete detailed, coordinated, and integrated plan for conducting a test to obtain answers to critical operational issues. Supplementing information may be documented in a TP Annex, when applicable.

Test Screening Document—A formal tasking document issued by HQ AFGSC/A3I requesting support of a system, software and/or component requiring operational testing prior to fielding. Due to falling outside the normal OTL, SELM and SOT requirements, this request is commonly referred to as an out-of-cycle test request. Additional details on out-of-cycle tests requests are outlined in AFI 99-103, AFGSC Supplement.

Test Support Manager (TSM)—A Lieutenant Colonel designated by the MW/CC to manage the unit SELM activities.

Test Team—For an OTL, consists of LD, TC, Countdown Control Officer (CCO), Launcher environmental protective system Control Monitor Officer (LCMO), Assistant LCMO (ALCMO) (if required), Monitor Control Operator (MCO) and Assistant MCO (AMCO). For SOT, consists of TD, Senior TC (STC), TC. For SELM, consists of TM and TC.

Test Unique Tasks—Those tasks which are not required at the operational unit or which are performed in a significantly different sequence and are unique to the operational test environment.

Weapon System Reliability (WSR)—ICBM WSR is the probability that an available sortie will successfully launch, deliver and detonate a warhead on target. System reliability is measured as the product of the subsystem reliability.

Attachment 2

SAMPLE OTL SORTIE STATUS REPORT

FROM: (REPORTING UNIT TF/CC)

TO: HQ AFGSC BARKSDALE AFB LA//A3IT/A3IN/A4M/A5R/SEW//
20 AF F E WARREN AFB WY//A3/A4/SE//
576 FLTS VANDENBERG AFB CA//CC/TE/TEM/TEML/TM/TMO//
AFNWC/NWI HILL AFB UT//SPM//NWIE/NWIES//
625 STOS OFFUTT AFB NE//OSK/OSO//
USSTRATCOM OFFUTT AFB NE//J38/J85/J872//
JFCC GS OFFUTT AFB NE//JF522//
328 WPS NELLIS AFB NV//DON//
DET 1 798 MUMG VANDENBERG AFB CA//CC//

UNCLAS

SUBJ: GLORY TRIP (NUMBER) STATUS REPORT FORMAT

1. THIS MESSAGE CONSISTS OF THREE PARTS CORRESPONDING TO PARTS I, II AND III OF THE OTL PROCESS. UPDATES AFTER EACH PART ARE AS FOLLOWS:

2. PART I. (Alert Readiness Test results and completion time)

3. PART II. (Missile Removal & Transfer results and completion time)
(Include the following for Part II: Stages I, II and III
PSRE serial numbers.
Primary and alternate guidance set serial numbers.
Primary and alternate MGS battery serial numbers.
Gyro data.
MK12A/21 RS serial numbers.
Components serial numbers by position.
Deployment module part number.
Shroud part number.
Tractor motor part number.
Deployment module electronics part number)

4. REMARKS. (Schedule deviations, explanation and impact on remaining schedule.)

5. POC: (Rank, Name, Phone Number)

SIGNATURE BLOCK

Attachment 3

SAMPLE OTL RS COMPONENTS AND ORDNANCE MOVEMENT REPORT

FROM: (REPORTING UNIT TF/CC)

TO: HQ AFGSC BARKSDALE AFB LA//A3IT/A3IN/A4M/A5R//

INFO: USSTRATCOM OFFUTT AFB NE//J38/J85/J872//
JFCC GS OFFUTT AFB NE//JF522//
20 AF F E WARREN AFB WY//CC/A3/A4//
30 SW VANDENBERG AFB CA//CC/OG//
576 FLTS VANDENBERG AFB CA//CC/TE/TEM/TEML/TM/TMO//
AFNWC/NWI HILL AFB UT//SPM//NWIE/NWIES//
328 WPS NELLIS AFB NV//DON//
DET 1 798 MUMG VANDENBERG AFB CA//CC//

UNCLAS

SUBJ: GLORY TRIP (Number) RS COMPONENTS AND ORDNANCE MOVEMENT REPORT

1. THE FOLLOWING GLORY TRIP (Number) RS COMPONENTS AND ORDNANCE WERE SHIPPED TO VANDENBERG AFB CA.

A. ORDNANCE. THE FOLLOWING ORDNANCE WERE SHIPPED ON (Date), BY (Mode of shipment). ETA TO VANDENBERG AFB IS (Date). SHIPPING DOCUMENT NUMBER(S) (Number).
(1) through (?) (Include the nomenclature, item line number, quantity, part and serial numbers for each component.)

B. REENTRY SYSTEMS. THE FOLLOWING RS COMPONENTS WERE SHIPPED ON (Date), BY (Mode of shipment). ETA TO VANDENBERG AFB IS (Date). SHIPPING DOCUMENT NUMBERS(S) (Number).
(1) RS SERIAL NUMBER: (Number).

C. REENTRY VEHICLES. THE FOLLOWING RV COMPONENTS WERE SHIPPED ON (Date), BY (Mode of shipment). ETA TO VANDENBERG AFB IS (Date). SHIPPING DOCUMENT NUMBER(S) (Number).
(1) through (?) (Include the nomenclature, part and serial numbers, and position for each RV component.)
(MK12A): Include these components by position A, B and C.

D. (MK12A): PAYLOAD BULKHEAD (Serial number)

E. SHROUD ASSEMBLY. THE FOLLOWING SHROUD ASSEMBLY COMPONENTS WERE SHIPPED ON (Date), BY (Mode of shipment). ETA TO VANDENBERG AFB IS (Date). SHIPPING DOCUMENT NUMBER(S) (Number).

(1) through (?) (Include the nomenclature, part and serial numbers, and position for each RV component.)

F. PENETRATION AIDS. THE FOLLOWING PENETRATION AIDS COMPONENTS WERE SHIPPED ON (Date), BY (Mode of shipment). ETA TO VANDENBERG AFB IS (Date). SHIPPING DOCUMENT NUMBER(S) (Number).
(1) through (?) (Include the nomenclature, part and serial numbers for each penetration aids component.)

2. ADDITIONAL INFORMATION.

A. UNACCOMPLISHED TCTOS: (If any)

B. LAST RS INSTALLATION DATE: (Date)

C. ABLATIVE REPAIRS ACCOMPLISHED SINCE MISSILE SELECTION: (If any)

D. REPAIRS OR COMPONENTS TO BE REPLACED AT VANDENBERG AFB: (If any)

E. ALL ORDNANCE ITEMS HAVE RECEIVED ELECTRICAL CHECK/VISUAL INSPECTION BEFORE SHIPMENT: (Yes or No)

3. POC: (Rank, name, and phone number)

SIGNATURE BLOCK

Attachment 4

SAMPLE OTL COMPONENT DAMAGE REPORT

FROM: (REPORTING UNIT TF/CC)

TO: HQ AFGSC BARKSDALE AFB LA//A3IT/A3IN/A4M/A5R/SEW//

INFO: 20 AF F E WARREN AFB WY//CC/A3/A4/SE//
576 FLTS VANDENBERG CC/TE/TEM/TEML/TM/TMO//
AFNWC/NWI HILL AFB UT//SPM//NWIE/NWIES//
USSTRATCOM OFFUTT AFB NE// J38/J85/J872//
JFCC GS OFFUTT AFB NE//JF522//
328 WPS NELLIS AFB NV//DON//
DET 1 798 MUMG VANDENBERG AFB CA//CC//

UNCLAS

SUBJ: GLORY TRIP (NUMBER), COMPONENT DAMAGE REPORT

1. OTL IDENTIFIER: (GT XX , Report no. #)

2. COMPONENT DAMAGED: (Include part and serial number)

3. TECHNICAL ORDER: (Include the page, paragraph, and step number when damaged was discovered)

4. DAMAGE DESCRIPTION: (Self-explanatory)

5. WHEN DISCOVERED: (Self Explanatory)

6. PROBABLE CAUSE: (Self-explanatory)

7. REMARKS: (Include action taken to correct problem)

8. POC: (Rank, name, and phone number)

SIGNATURE BLOCK

Attachment 5

SAMPLE OTL MISSION AND PRELIMINARY SCORING REPORT

NOTE: SAMPLE REPORT IS UNCLASSIFIED; PORTION MARKINGS ARE FOR EXAMPLE PURPOSES ONLY

FROM: 576 FLTS VANDENBERG AFB CA//CC//

TO: HQ USAF WASHINGTON DC//A10O/A10R//
HQ AFGSC BARKSDALE LA//CCE/A3/A3I/A3IT/A3IN/A4/A4M/A5R/SEW//
HQ AFMC/AFNWC KIRTLAND AFB NM//CCE/CTA//
USSTRATCOM OFFUTT AFB NE//J38/J85/J872//
JFCC GS OFFUTT AFB NE//JF522/
20 AF FE WARREN AFB WY//CCE/CV/A3/A4/SE//
(UNIT)//CCE/OG/OSK//
625 STOS OFFUTT AFB NE//OSK/OSO//
AFNWC/NWI HILL AFB UT//SPM//NWIE/NWIES//
AFOTEC KIRTLAND AFB NM//CCE//
328 WPS NELLIS AFB NV//DON//
DET 1 798 MUMG VANDENBERG AFB CA//CC//
MIT-LL LEXINGTON MA//LEROY SIEVERS//
LLNL LIVERMORE CA//STEVE YAKUMA// (LIDSS MISSIONS ONLY)
DOE SANDIA ALBUQUERQUE NM//DENNIS MOWRY//

INFO: DOE SANDIA LABS ALBUQUERQUE NM//ORG12363//
BOEING NORTH AMERICA HUNTINGTON BEACH CA
NGAS-VAFB VANDENBERG AFB CA//T CUDDY//

S E C R E T//FORMERLY RESTRICTED DATA

SUBJ: GLORY TRIP (NUMBER) MISSION AND PRELIMINARY SCORING REPORT (U)

1. THIS MESSAGE IS IN THREE PARTS.

PART I: (U) THIS IS THE INITIAL MISSION AND SCORING REPORT FOR GLORY TRIP (NUMBER), 30 SW OP (W NUMBER), LGM 30G MISSILE, USING KMISS OR LLNL RAFTS FOR SCORING.

PART II: (U) MISSION EVENTS:

A. (U) COUNT PICKUP: (Zulu DTG)

B. (U) ALCS EVENTS: (If applicable)

C. (U) ABNORMAL COUNTDOWN EVENTS: (Holds, recycles, etc.)

D. (U) TIME OF LIFTOFF (OR ABORT): (Zulu DTG)

E. (U) SUBSYSTEM PERFORMANCE: (Nominal or non-nominal to include special objectives; don't define failure modes)

F. (U) SENSOR COVERAGE: (By exception, if lack of coverage degrades mission objectives)

G. (U) REMARKS: (Include any significant events or discrepancies not reported above. Base all in-flight times on liftoff. For anomalies, don't include failure modes but report the fact there was a failure and if destruct commands were/were not issued.)

PART III: (U) SCORING RESULTS.

A. (S//FRD) RV-1: TIME OF IMPACT: (Zulu DTG), IMPACT LOCATION IN DOD WGS COORDINATES: (Lat, Long), RADIAL MISS DISTANCE: (In feet), DOWNRANGE MISS DISTANCE: (In feet), CROSSRANGE MISS DISTANCE: (Left or Right in feet).

2. POC IS (Rank, name, and phone number)

SIGNATURE BLOCK

DERV:

Attachment 6

SAMPLE UNCLASSIFIED OTL FINAL SCORING REPORT

NOTE: SAMPLE REPORT IS UNCLASSIFIED; PORTION MARKINGS ARE FOR EXAMPLE PURPOSES ONLY

FROM: 576 FLTS VANDENBERG AFB CA//CC//

TO: HQ USAF WASHINGTON DC//A10O/A10R//
HQ AFGSC BARKSDALE LA//CCE/A3/A3I/A3IT/A3IN/A4/A4M/A5R/SEW//
HQ AFMC/AFNWC KIRTLAND AFB NM//CCE/CTA//
USSTRATCOM OFFUTT AFB NE//J38/J85/J872//
JFCC GS OFFUTT AFB NE//JF522//
20 AF FE WARREN AFB WY//CCE/CV/A3/A4/SE//
(UNIT)//CCE/OG/OSK//
625 STOS OFFUTT AFB NE//OSK/OSO//
AFNWC/NWI HILL AFB UT//SPM//NWIE/NWIES//
AFOTEC KIRTLAND AFB NM//CCE/
328 WPS NELLIS AFB NV//DON//
DET 1 798 MUMG VANDENBERG AFB CA//CC//
MIT-LL LEXINGTON MA//LEROY SIEVERS//
LLNL LIVERMORE CA//STEVE YAKUMA// (LIDSS MISSIONS ONLY)
DOE SANDIA ALBUQUERQUE NM//DENNIS MOWRY//

INFO: DOE SANDIA LABS ALBUQUERQUE NM//ORG12363//
BOEING NORTH AMERICA HUNTINGTON BEACH CA
NG VT&E VANDENBERG AFB CA//T CUDDY//

UNCLAS OR S E C R E T//FORMERLY RESTRICTED DATA

SUBJ: GLORY TRIP (NUMBER) FINAL SCORING REPORT (U)

1. (U) UPDATED SCORING RESULTS.

A. (S//FRD) RV-1: TIME OF IMPACT: (Zulu DTG), IMPACT LOCATION IN DOD WGS COORDINATES: (Lat, Long), RADIAL MISS DISTANCE: (In feet), DOWNRANGE MISS DISTANCE: (In feet), CROSSRANGE MISS DISTANCE: (Left or Right in feet).
OR
1. (U) NO UPDATES REQUIRED FROM THE PRELIMINARY SCORING REPORT.

2. POC IS (Rank, name, and phone number)

SIGNATURE BLOCK

DERV:

Attachment 7

OTL KEY EVENT FLOW

ACTIVITY	KEY EVENT FLOW
Sortie Select (AFGSC/A3)	T-180
Publish TEO (576 FLTS)	T-150
Booster Arrival at VAFB (MW or AFNWC/NWI)	T-92
MGS Arrival at VAFB (MW or AFNWC/NWI)	T-92
MOD 7 Wafer arrival at VAFB (AFNWC/NWI)	T-92
RS Arrival at VAFB (MW or AFNWC/NWI)	T-85
MGS Batteries Arrival at VAFB (MW or AFNWC/NWI)	T-85
PSRE Arrival at VAFB (MW or AFNWC/NWI)	T-85
TF Arrival at VAFB (MW)	T-28
Alert Ready Date	T-21
OTL Mission and Preliminary Scoring Report	NLT T+8 Hours
HQ AFGSC/A3 Approve Performance Report	NLT 60 calendar days of last data item received

***Note 1*:** Dates are notional and can change by mission.

***Note 2*:** JTA and RV delivery dates are mission specific.

Attachment 8

SAMPLE GIANT PACE KEY PERSONNEL MESSAGE

FROM: (UNIT)

TO: HQ AFGSC BARKSDALE LA//CCE/A3/A3I/A3IT/A3IN/A4/A4M/A5R/SEW//
20 AF F E WARREN AFB WY//A3/A4/SE//
576 FLTS VANDENBERG AFB CA//CC/TE/TEM/TEMF/TM/TMO//

INFO: AFNWC/NWI HILL AFB UT//SPM//NWIE/NWIES//
328 WPS NELLIS AFB NV//DON//

UNCLAS

SUBJ: GIANT PACE (NUMBER) KEY PERSONNEL

1. TEST SUPPORT MANAGER: (Rank, Name, Org/Office Symbol, Duty Phone)

2. OPERATIONS OFFICER: (Rank, Name, Org/Office Symbol, Duty Phone)

3. MAINTENANCE OFFICER: (Rank, Name, Org/Office Symbol, Duty Phone)

4. MAINTENANCE NCOIC: (Rank, Name, Org/Office Symbol, Duty Phone)

5. SECURITY OIC/NCOIC: (Rank, Name, Org/Office Symbol, Duty Phone)

6. POC: (Rank, Name, Phone Number)

Attachment 9

SELM KEY EVENT FLOW

ACTIVITY	AGENCY	SELM
Publish TEO	576 FLTS	T-22 weeks
Appoint SELM TSM and other Key Five Personnel	MW	NLT 5 days after TEO receipt
Review T.O.s and submit changes	MW	T-13 weeks
Publish SELM OPLAN	MW	T-8 weeks
AFNWC/NWI MTU on station	AFNWC/ NWIEI	T-8 weeks
Pretest Briefing	576 FLTS	T-8 weeks
Lesson plans to 576 FLTS	MW	T-8 weeks
Submit SELM Posture and OPLAN 8010 Reposture Schedules to 576 FLTS	MW	T-6 weeks
Publish TP	576 FLTS	T-30 days prior to TRRB
TM/TC on station	576 FLTS	T-4 weeks
PTARR	MW	Prior to ART
Conduct ART	MW	T-4 weeks
Begin SELM Posture	MW	No earlier than T-19 days
Distribute Final TSD	576 FLTS	T-2 weeks
TMA on station	576 FLTS	T-1 week
SELM Alert	MW	Friday before Test Week
Last Line Isolation (T-0)	576 FLTS	Friday before Test Week
AFNWC/NWI Mobile Instrumentation Facility Arrives at MW	AFNWC/ NWIEI	1 Day Prior to Test Start
Test Readiness Review Board (TRRB)	MW and HQ AFGSC/A3	1 Day Prior to Test Start
Airborne Test Day	576 FLTS	Tuesday of Test Week
Ground Test Day	576 FLTS	Wednesday of Test Week
Backup Test Day	576 FLTS	Thursday of Test Week
Squadron Restoration	576 FLTS	Immediately following test completion
OPLAN 8010 Alert	MW	Typically 19 days after Squadron Restoration
T.O. review and submit changes	MW	NLT 5 weeks after Squadron Restoration
Publish Performance Report	576 FLTS	NLT 60 days from receipt of last data item
Submit SELM Expense Report	MW	NLT 90 days from OPLAN 8010 Alert

Attachment 10

SAMPLE SELM STATUS REPORT

FROM: (REPORTING UNIT)

TO: HQ AFGSC BARKSDALE LA//CCE/A3/A3I/A3IT/A3IN/A4/A4M/A5R/SEW//

INFO: HQ USAF WASHINGTON DC//A10O/A10R//
USSTRATCOM OFFUTT AFB NE//J38/J85/J872//
JFCC GS OFFUTT AFB NE//JF522//
20 AF F E WARREN AFB WY//A3/A4/SE//
625 STOS OFFUTT AFB NE//OSK/OSO//
576 FLTS VANDENBERG AFB CA//CC/TE/TEM/TEMF//
AFNWC/NWI HILL AFB UT//SPM//NWIE/NWIES//
328 WPS NELLIS AFB NV//DON//

UNCLAS

SUBJ: GIANT PACE (NUMBER) STATUS REPORT # ___

1. THIS MESSAGE CONSISTS OF THREE PARTS CORRESPONDING TO PART I, II, AND IV OF THE SIMULATED ELECTRONIC LAUNCH (SELM) PROCESS. UPDATES AFTER EACH PART ARE AS FOLLOWS:

2. PART I. ALERT READINESS TEST (SCNT, ENABLE TEST, MISSILE TEST, INHIBIT TEST, CMVC):

SITE	DATE	RESULTS
(LF #)	(Date of Test)	(S, SA, F, or NT)

3. PART II. SELM POSTURE

SITE	DTG
(LCC/LF #)	(Zulu)

4. PART IV. OPLAN 8010 REPOSTURE

SITE	DTG
(LCC/LF #)	(Zulu)

5. POC: (Name, rank, phone number)

SIGNATURE BLOCK

Note: This report should be unclassified and must not contain data on causes of failures or failed components. A description of abnormal indications, hardware/software anomalies or test failures must be provided in a classified follow-up SELM Problem Report.

Attachment 11

SAMPLE SELM TEST READINESS REVIEW BOARD AGENDA

1. Introduction – MW/CC
2. Briefing and Verifying Personnel - TSM
3. Implementing Directives - TSM
4. Test Overview - TSM/TM
    - Test Objectives
    - Ground and Airborne Test Day Test Increment Activities
    - Anomaly Analysis Procedures
    - Key personnel Locations for Part II and III
    - Operational Risk Assessment

READINESS CERTIFICATIONS

5. OSB
6. Enable and Launch Control Panel Verifications and Locations - OSB
7. LF/MAF Isolation Verification - Maintenance OIC
8. LF Configuration Verification - Maintenance OIC
9. Open TCTOs on Test LFs - Maintenance OIC
10. Safety Plan and Training - SE
11. MCC Manning in Test Squadron - OSOT
12. MCC Test Sequence Training - OSOT
13. MCC Exercise Initiation Training - OSK
14. Maintenance Training - MXOT
15. ALCS Code Verification - 625 STOS/OSO
16. ALCS Communications and Launch Procedures - 625 STOS/OSO
17. ALCS Training
18. Operations Certification Summary - OG/OTO/CC
19. Maintenance Certification Summary - Maintenance OIC
20. TSM and Wing Commander's Verification Certification - TSM & CC

SIGNATURE BLOCK

Attachment 12

SAMPLE SELM PROBLEM REPORT

FROM: (REPORTING UNIT)
TO: HQ AFGSC BARKSDALE LA//CCE/A3/A3I/A3IT/A3IN/A4/A4M/A5R/SEW//

INFO: HQ USAF WASHINGTON DC//A10O/A10R//
USSTRATCOM OFFUTT AFB NE//J38/J85/J872//
JFCC GS OFFUTT AFB NE//JF522//
20 AF F E WARREN AFB WY//A3/A4/SE//
625 STOS OFFUTT AFB NE//OSK/OSO//
576 FLTS VANDENBERG AFB CA//CC/TE/TEM/TEMF//
AFNWC/NWI HILL AFB UT//SPM//NWIE/NWIES//
328 WPS NELLIS AFB NV//DON//

(CLASSIFICATION)

SUBJ: GIANT PACE (NUMBER) PROBLEM REPORT # ____ (U)

1. (U) TEST: GIANT PACE (Number)

2. (U) UNIT: (Operational unit, Squadron)

3. (U) PROBLEM SITE: (LCC/LF Number)

4. ( ) PROBLEM DESCRIPTION: (Include weapon system commands/responses, components, parts and serial numbers)

5. (U) TECHNICAL ORDER: (Include the page, paragraph and step number of T.O. in use when problem was discovered.

6. (U) WHEN DISCOVERED: (Self-explanatory)

7. ( ) PROBABLE CAUSE: (Self-explanatory)

8. ( ) REMARKS: (Include actions taken to correct problem.)

9. (U) POC: (Name, rank and phone number.)

SIGNATURE BLOCK

Note 1: When this report is used to report preliminary causes of Parts I or III failures, it will be classified IAW the ICBM SCG.
Note 2: Fill in classification ( ) of each paragraph as appropriate.
Note 3: This is just a preliminary report of initial indications and suspected causes. Detailed analysis results will be reported in the SELM Anomaly Analysis Report and the Performance Report.

Attachment 13

SAMPLE SELM TERMINAL COUNTDOWN REPORT

FROM: (REPORTING UNIT)

TO: HQ AFGSC BARKSDALE LA//CCE/A3/A3I/A3IT/A3IN/A4/A4M/A5R/SEW//

INFO: HQ USAF WASHINGTON DC//A10O/A10R//
USSTRATCOM OFFUTT AFB NE//J38/J85/J872//
JFCC GS OFFUTT AFB NE//JF522//
20 AF F E WARREN AFB WY//CC/A3/A4/SE//
625 STOS OFFUTT AFB NE//OSK/OSO//
576 FLTS VANDENBERG AFB CA//CC/TE/TEM/TEMF//
AFNWC/NWI HILL AFB UT//SPM//NWIE/NWIES//
328 WPS NELLIS AFB NV//DON//

UNCLAS

SUBJ: GIANT PACE (NUMBER) TERMINAL COUNTDOWN REPORT # ____

1. TEST DAY START TIME (Zulu DTG)

2. TEST INCREMENT: (Increment number)
(A) COMMIT TIME: (Zulu DTG)
(B) METHOD OF COMMIT: (Ground or Airborne)
(C) SORTIE TCD RESULT
(LF number) Zulu DTG) (Successful, Successful with anomaly, or Failure)

3. TEST INCREMENT: (Increment number)
(A) COMMIT TIME: (Zulu DTG)
(B) METHOD OF COMMIT: (Ground or Airborne)
(C) SORTIE TCD RESULT
(LF number) (Zulu DTG) (Successful, Successful with anomaly, or Failure)

4. TEST INCREMENT: (Increment number)
(A) COMMIT TIME: (Zulu DTG)
(B) METHOD OF COMMIT: (Ground or Airborne)
(C) SORTIE TCD RESULT
(LF number) (Zulu DTG) (Successful, Successful with anomaly, or Failure)

5. TEST DAY END TIME (Zulu DTG)

6. POC: (Name, rank and phone number)

SIGNATURE BLOCK

Attachment 14

SAMPLE SELM ANOMALY ANALYSIS REPORT

FROM: (REPORTING UNIT)

TO: HQ AFGSC BARKSDALE LA//CCE/A3/A3I/A3IT/A3IN/A4/A4M/A5R/SEW//

INFO: HQ USAF WASHINGTON DC//A10O/A10R//
USSTRATCOM OFFUTT AFB NE//J38/J85/J872//
JFCC GS OFFUTT AFB NE//JF522//
20 AF F E WARREN AFB WY//CC/A3/A4/SE//
625 STOS OFFUTT AFB NE//OSK/OSO//
576 FLTS VANDENBERG AFB CA//CC/TE/TEM/TEMF//
AFNWC/NWI HILL AFB UT//SPM//NWIE/NWIES//
328 WPS NELLIS AFB NV//DON//

(CLASSIFICATION)

SUBJ: GIANT PACE (NUMBER) ANOMALY ANALYSIS REPORT # ____ (U)

1. (U) TEST: GIANT PACE (Number)

2. (U) UNIT: (Operational unit, Squadron)

3. (U) ANOMALY SITE: (LF/LCC number)

4. (U) CLASSIFICATION OF ANOMALY: (Classification)

5. (U) DATE/TIME OF ANOMALY: (Zulu DTG)

6. (U) TEST INCREMENT: (Number)

7. ( ) ANOMALY: (Detailed explanation of anomaly)

8. (U) TEST SYNOPSIS: (Brief description of test actions being accomplished.)

9. ( ) ANOMALY ANALYSIS: (Probable cause to include part number, serial numbers and nomenclature of possible failed component.)

10. ( ) ACTION TAKEN: (Detailed explanation)

11. ( ) IMPACT OF ANOMALY: (Detailed explanation of effect on launch capability)

12. ( ) RECOMMENDATIONS: (Self-explanatory)

13. ( ) CONCLUSION: (Summarize anomaly to include recommended scoring of site)

14. (U) POC: (Name, rank, and phone number)

SIGNATURE BLOCK

Note: Fill in classification ( ) of each paragraph as appropriate.

Attachment 15

SAMPLE HAC/RMPE SOFTWARE OPERATIONAL TEST ACTIVITY REPORT (QUICK LOOK)

FROM: 576 FLTS VANDENBERG AFB CA//CC//

TO: HQ AFGSC BARKSDALE AFB LA//CCE/SE/A3/A3I/A3IT/A3IA/A6/A6O/A6ON//

INFO: HQ USAF WASHINGTON DC//A10O/A10R//
USSTRATCOM OFFUTT AFB NE//J38//
20 AF FE WARREN AFB WY//A3N/A3NK//
AFNWC/NWI HILL AFB UT//SPM//NWIE/NWIES//
AFNWC ICBM GROUND SYSTEMS BRANCH HILL AFB UT//NWIA//
AFNWC ICBM FLIGHT SYSTEMS BRANCH HILL AFB UT//NWIB//
AFNWC ICBM FUTURE SYSTEMS BRANCH HILL AFB UT//NWIC//
328 WPS NELLIS AFB NV//DON//
520 SMXS/MXDEB ICBMSG OFFUTT AFB NE//EN//

UNCLAS

SUBJ: (TEST TITLE) HIGHER AUTHORITY COMMUNICATIONS/RAPID MESSAGE PROCESSING ELEMENT (HAC/RMPE) SOFTWARE OPERATIONAL TEST QUICK LOOK REPORT.

1. SOFTWARE VERSION AND CMCC DATA:

2. TEST DATES:

3. TEST FACILITY:

4. TEST LOCATION:

5. SOFTWARE CHANGES (AF Form 1067s):

6. TEST RESULTS:

7. SIGNIFICANT FINDINGS:

8. REMARKS:

9. POC: (Name, rank and phone number)

SIGNATURE BLOCK

Attachment 16

SAMPLE COP SOFTWARE OPERATIONAL TEST ACTIVITY REPORT

(QUICK LOOK)

FROM: 576 FLTS VANDENBERG AFB CA//CC//

TO: HQ AFGSC BARKSDALE AFB LA//CCE/SE/A3/A3I/A3IT/A3IA//

INFO: HQ USAF WASHINGTON DC//A10O/A10R//
USSTRATCOM OFFUTT AFB NE//J38//
20 AF FE WARREN AFB WY//A3N/A3NK/
AFNWC/NWI HILL AFB UT//SPM//NWIE/NWIES//
AFNWC ICBM GROUND SYSTEMS BRANCH HILL AFB UT//NWIA//
AFNWC ICBM FLIGHT SYSTEMS BRANCH HILL AFB UT//NWIB//
AFNWC ICBM FUTURE SYSTEMS BRANCH HILL AFB UT//NWIC//
328 WPS NELLIS AFB NV//DON//

UNCLAS

SUBJ: (TEST TITLE) CONSOLE OPERATING PROGRAM SOFTWARE OPERATIONAL TEST QUICK LOOK REPORT.

1. SOFTWARE VERSION:

2. TEST DATES:

3. TEST FACILITY:

4. TEST LOCATION:

5. SOFTWARE CHANGES (AF Form 1067s):

6. TEST RESULTS:

7. SIGNIFICANT FINDINGS:

8. REMARKS:

9. POC: (Name, rank and phone number)

SIGNATURE BLOCK

Attachment 17

OLYMPIC PLAY TEST REQUIREMENTS

TEST/COMMAND
Enable Test (Note 1)
Missile Test (Note 1)
SCNT (Note 1)
Computer Memory Verification Check (Note 1)
Target Verification Interrogation (All-Call Day-to-Day)
WS BS/L Computer Memory Security Check
Case Input Library Checksum
Note 1: Command test to each on-alert sortie within primary responsibility.

Attachment 18

SAMPLE OLYMPIC PLAY RESULTS REPORT

NOTE: SAMPLE REPORT IS UNCLASSIFIED; PORTION MARKINGS ARE FOR EXAMPLE PURPOSES ONLY

FROM: (REPORTING UNIT)

TO: 576 FLTS VANDENBERG AFB CA//TEMA//

INFO: HQ AFGSC BARKSDALE AFB LA//A3IT/A4M
20 AF F E WARREN AFB WY//A4M//
576 FLTS VANDENBERG AFB CA//CC//

S E C R E T

SUBJ: (UNIT) OLYMPIC PLAY REPORT

1. (U) SQUADRON: (Self-explanatory)

2. (U) TEST DTG: (Zulu DTG test started)

3. (U) TYPE OF TEST: (Scheduled, HQ AFGSC, 20 AF or Local Exercise)

4. (U) NUMBER OF LFS TESTED: (Number of LFs tested and scored)

5. (U) NUMBER OF SUCCESSFUL LFS: (Number of LFs scored as successful)

6. (U) NUMBER OF SUCCESSFUL WITH ANOMALY LFS: (Number of LFs scored as successful with anomaly)

7. (U) TOTAL NUMBER OF SUCCESSFUL LFS: (Number of LFs scored successful and successful with anomaly.)

8. (U) NUMBER OF FAILED LFS: (Number of LFs scored as failures)

9. (U) NUMBER OF NO-TEST LFs: (Number of LFs scored as no-test)

10. (U) LF FAILURES: (Identify LF, reason for failure and corrective action. e.g. L-10 GMR 18, MOSR 19. STBNG DURING MISSILE TEST SEG 1. CORRECTIVE ACTION: R&R 403A1A (CSD(G)) DRAWER.)

11. (U) SUCCESSFUL WITH ANOMALY LFS: (Identify LF, anomaly, and corrective action. e.g. G-02, NO RADDT DURING SCNT, CORRECTIVE ACTION: R&R UHF DRAWER.)

12. (U) NO-TEST LFS: (Identify LF and reason for scoring as no-test. e.g. A-04 TRAINING LF.)

13. (U) POC: (Name, rank, and phone number)

Attachment 19

SAMPLE OLYMPIC PLAY SORTIE EFFECTIVENESS REPORT

MEMORANDUM FOR 576 FLTS/TEMA

FROM: (Unit)
(Unit Address)

SUBJECT: (Unit) OLYMPIC PLAY Sortie Effectiveness Report for (LF number)

1. The following information is provided IAW **paragraph 5.2.5.2**.

a. FAULT DESCRIPTION: (Description of fault to include Zulu DTG fault occurred, fault indications and command being accomplished when fault occurred.)

b. CORRECTIVE ACTION: (Actions taken to correct fault to include T.O.s used, specific steps, and Zulu DTG sortie was returned to alert.)

c. LF HISTORY: (Include any recent LF history which may be pertinent to this fault.)

d. RECOMMENDED SCORING: (IAW scoring criteria in **paragraph 5.2.5.1.**)

2. If there are any questions concerning this report, please contact (name and rank) at DSN (phone).

Signature Block

cc:
HQ AFGSC/A3IT/A4M/SEW
20 AF/A4M/SE
576 FLTS/CC/TE
AFNWC/NWI

Note: Report will be mailed to the following addresses:

HQ AFGSC/A3IT/A4M/SEW
245 Davis Ave E., Ste 200
Barksdale AFB LA 71110-2278

20 AF/A4M/SE
6610 Headquarters Dr, Ste 3383
F E Warren AFB WY 82005-3943

AFNWC/NWIEI
6014 Dogwood Ave
Hill AFB UT 85056-5816

576 FLTS/CC/TE
1785 Utah Ave, Ste 1
Vandenberg AFB CA 93437-5238

Attachment 20

SAMPLE OLYMPIC PLAY QUARTERLY REPORT

Part 1 of 2

CLASSIFICATION

OLYMPIC PLAY TEST RESULTS (U)
1 JAN - 31 MAR 10

CHART I - UNIT SUMMARY (U)

Unit	Evaluated	Successful	Successful w/Anomaly	Total Successful	Failure	Success/Eval Ratio
90 MW	**435**	**434**	**1**	**435**	**0**	**1.0000**
91 MW	**445**	**445**	**0**	**445**	**0**	**1.0000**
341 MW	**441**	**398**	**2**	**400**	**41**	**0.9070**

CLASSIFICATION

Part 2 of 2

CLASSIFICATION

CHART II - WEAPON SYSTEM SUMMARY (U)

	Total Evaluated	Successful	Successful w/Anomaly	Total Successful	Failure	Success/Eval Ratio
Total ICBM	1,321	1,277	3	1,280	41	0.969

CLASSIFICATION

OPR: 576 FLTS/TEMA CLASSIFIED BY: ICBM SCG, 23 Oct 08

DATE: 15 APR 10 DECLASSIFY ON: OADR

CLASSIFICATION

(UNCLASSIFIED EXAMPLE)

Atch 1 (1 of 1)

Sample of Attachment 2 to Quarterly Report.

UNCLASSIFIED
SORTIE FAILURE DATA
1 JAN - 31 MAR 10

90 MW F E WARREN AFB

SORTIE: (Self-explanatory) **DTG:** (Zulu DTG test started)
FAULT: (Brief description of failure to include fault indications and test being accomplished.)
CORRECTIVE ACTION: (Corrective action taken.)
SORTIE: B-05 **DTG:** 05/1800Z MAR 10
FAULT: MOSR 19 DURING MISSILE TEST.
CORRECTIVE ACTION: R&R 403A1A DRAWER (COMMAND SIGNAL DECODER-GROUND).

91 MW MINOT AFB

NO FAILURES

341 MW MALMSTROM AFB

NO FAILURES

Atch 2 (1 of 1)

UNCLASSIFIED

Sample of Attachment 3 to Quarterly Report.

UNCLASSIFIED
SORTIE ANOMALY DATA
1 JAN - 31 MAR 10

90 MW F E WARREN AFB

SORTIE: (Self-explanatory) **DTG**: (Zulu DTG test started)
FAULT: (Brief description of failure to include anomaly indications and test being accomplished.)
CORRECTIVE ACTION: (Corrective action taken.)
SORTIE: A-05 **DTG**: 05/1800Z MAR 10
FAULT: NO GMR 18 DURING MISSILE TEST.
CORRECTIVE ACTION: R&R 403A4 (MESSAGE PROCESSOR DRAWER).

91 MW MINOT AFB

NO FAILURES

341 MW MALMSTROM AFB

NO FAILURES

Atch 3 (1 of 1)

UNCLASSIFIED

Attachment 21

SAMPLE ANOMALY ANALYSIS REPORT (NON-OTL OR SELM)

NOTE: Use/adjust addresses as needed

FROM: 576 FLTS VANDENBERG AFB CA//CC//

TO: HQ AFGSC BARKSDALE AFB LA//CCE/SE/A3/A3I/A3IT/A3IA/A6/A6O/A6ON//

INFO: HQ USAF WASHINGTON DC//A10O/A10R//
USSTRATCOM OFFUTT AFB NE//J38//
20 AF FE WARREN AFB WY//A3N/A3NK/
AFNWC/NWI HILL AFB UT//SPM//NWIE/NWIES//
AFNWC ICBM GROUND SYSTEMS BRANCH HILL AFB UT//NWIA//
AFNWC ICBM FLIGHT SYSTEMS BRANCH HILL AFB UT//NWIB//
AFNWC ICBM FUTURE SYSTEMS BRANCH HILL AFB UT//NWIC//
328 WPS NELLIS AFB NV//DON//
520 SMXS/MXDEB ICBMSG OFFUTT AFB NE//EN//

(CLASSIFICATION)

SUBJ: HIGHER AUTHORITY COMMUNICATIONS/RAPID MESSAGE PROCESSING ELEMENT BASELINE UPDATE 10-1 SOFTWARE OPERATIONAL TEST ANOMALY ANALYSIS REPORT (U)

1. (U) TEST: HAC/RMPE BU 10-1

2. (U) UNIT: 576 FLTS

3. (U) ANOMALY SITE: (LCC/SMIC Name)

4. (U) CLASSIFICATION OF ANOMALY: (Classification)

5. (U) DATE/TIME OF ANOMALY: (Zulu DTG)

6. (U) TEST INCREMENT: (Number)

7. ( ) AF Form 1067: (Change Request Under Test)

8. ( ) ANOMALY: (Detailed explanation of anomaly)

9. (U) TEST SYNOPSIS: (Brief description of test actions being accomplished.)

9. ( ) ANOMALY: (Probable cause to include part number, serial numbers and nomenclature of possible failed component.)

10. ( ) ACTION TAKEN: (Detailed explanation)

11. ( ) GUIDANCE: (Detailed explanation of any applicable guidance)

12. ( ) RECOMMENDATIONS: (Self-explanatory)

13. ( ) CONCLUSION: (Summarize anomaly to include recommended scoring of site)

14. (U) POC: (Name, rank, and phone number)

SIGNATURE BLOCK

Note: Fill in classification ( ) of each paragraph as appropriate.

Attachment 22

SELM TEST TEAM COMPOSITION

TEAM	TEAM COMPOSITION	TRAINING REQUIREMENT	LOCATION
ANOMALY ANALYSIS TEAM (AAT)	MW/CC	ANOMALY INVESTIGATION & ANALYSIS PROCEDURES	TEST COMMAND POST
	SQ/CC		
	TSM		
	TM		
	Mnx Officer		
	SELECT		
	576 FLTS/CC OR REP		
	WG MISSILE SAFETY OFFICER		
	CHIEF, TECHNICAL ENGINEERING FLIGHT		
	CHIEF, QUALITY ASSURANCE		
	CHIEF, STANDARDIZATION/EVALUATION		
	CHIEF, OPERATIONS TRAINING		
	AAMT		
ANOMALY ANALYSIS MANAGEMENT TEAM (AAMT)	MNX OFFICER	SAME AS AAT	PRIMARY TEST MAF
	TECHNICAL ENGINEER		
	QUALITY ASSURANCE		
TEST EVALUATION TEAM (TET)	PEN QUALIFIED MAINTENANCE TEAM	SITE SAFING	1 - AT EACH MAF IN TEST SQUADRON
		EMERGENCY S/D	
		QUICK LOOK INSPECTION PROCEDURES	
		SELM CONTROL MONITOR TAPE RETRIEVAL	1 - AT EACH ORDNANCE LF
		PROPER SITE SHUTDOWN FOLLOWING SIMULATED EXECUTION	
QUICK REACTION MAINTENANCE TEAM (QRM)	PEN QUALIFIED MAINTENANCE TEAM	SITE SAFING	1 - AT EACH NON-TEST SQUADRON
		EMERGENCY S/D	