

**BY ORDER OF THE COMMANDER
45TH SPACE WING**

**45TH SPACE WING INSTRUCTION
10-605**



21 OCTOBER 2019

Operations

**45TH SPACE WING EASTERN
RANGE ACCEPTANCE PROCESS**

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This instruction implements AFSPCI10-605, *Operational Acceptance Process*. It establishes a uniform process to Operationally Accept or Rescind Acceptance for Eastern Range Instrumentation Systems (ERIS) when acceptance authority is delegated to the 45th Space Wing (45 SW). It also establishes configuration control guidance for hardware, software, and firmware modifications to ERIS. It applies to personnel and agencies of the 45th Space Wing (45 SW) involved in the acquisition, installation, integration, test and evaluation, logistics support, operation, and maintenance of new or modified instrumentation systems on the Eastern Range (ER). Ensure that all records created as a result of processes prescribed in this publication are maintained IAW Air Force Manual (AFMAN) 33-363, Management of Records, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command. This publication may not be supplemented or further implemented/extended. Submit requests for waivers through the chain of command to the Publication OPR.

SUMMARY OF CHANGES

This Instruction replaces 45SWI10-602 and reflects the changes to the Acceptance and Configuration Control process. This instruction updates the chair and approval authority for the Operational Acceptance Board, provides minor corrections to the ECPM process for emergency items, updates office symbols, and identifies the role of the 45 SCS in telemetry and communications systems.

1. Objectives.

- 1.1. To provide the Eastern Range an operationally accepted configuration to conduct Wing missions, including safety critical and mission critical operations.
- 1.2. To ensure each new or modified ERIS:
 - 1.2.1. Is adequately documented as to its operational capabilities.
 - 1.2.2. Satisfies mission support requirements.
- 1.3. To ensure that logistics support including facilities, material, spares, documentation, maintenance, cyber security, and training are properly addressed.
- 1.4. To ensure the system interfaces, performance capabilities, and design limitations are documented prior to scheduling and committing a system for operational support.
- 1.5. To provide a uniform process to: identify, validate, control, and status all ERIS modifications.
- 1.6. To minimize delays in acquiring new or modified ERIS for operational use.
- 1.7. To provide a process that identifies operational limitations and required improvements.

2. Applicability.

- 2.1. This instruction establishes guidelines for the documentation, operational acceptance of new or modified ERIS, and acceptance rescission for ERIS components for which the Wing exercises operational configuration control responsibility.
- 2.2. This instruction applies to personnel and agencies of the Wing involved in the acquisition, installation, integration, test and evaluation, logistics support, operation, and maintenance of ERIS.

3. Organizational Responsibilities.

- 3.1. This details the responsibilities for the Eastern Range Instrumentation Operational Acceptance Process.
- 3.2. The 45 RANS.
 - 3.2.1. When delegated, chairs and is the approval authority for the Operational Acceptance Board (OAB), and manages the Operational Acceptance Process. Authority will not be delegated below the flight chief level.
 - 3.2.2. Responsible for operating and maintaining all new and modified ERIS, except communications and telemetry systems.
 - 3.2.3. Responsible for configuration control of all ERIS.
 - 3.2.4. Ensures adequate spares are provided for all new or modified systems.
 - 3.2.5. Ensures adequate documentation and training are provided for all new or modified systems.
 - 3.2.6. Insures all new or modified systems are adequately tested.
 - 3.2.7. Issues the Operational Acceptance Memorandum (OAM) for operational use of new or modified ERIS.

3.3. The 45 SCS.

3.3.1. Serves as an OAB member as required to ensure that range communication and telemetry systems requirements are address in new or modified ERIS.

3.3.2. Responsible for operating and maintaining all new and modified communications and telemetry ERIS.

3.4. The 45 SW/SE.

3.4.1. Serves as an OAB member as required to ensure that Range Safety requirements are addressed in new or modified ERIS. .

3.5. The 45 WS.

3.5.1. Serves as an OAB member as required to ensure that Meteorological requirements are addressed in new or modified ERIS.

3.6. SMC/PELP.

3.6.1. Serves as OAB member to address any issues regarding new or modified ERIS.

4. Operational Acceptance Process.

4.1. The 45 SW Standard Operational Acceptance Process (**Figure 1**), as defined in the following paragraphs, is the process for accepting new or modified ERIS. The 45 SW Rescind Acceptance Process, as defined in **Paragraph 4.4**, is the process for rendering systems unavailable for operational use. Process and timelines are implemented using an electronic tool, accessed via the following link: <https://imis.rc.patrick.af.mil/vrvhome/>

4.1.1. The development agency recommends acceptance of a new or modified ERIS after successful completion of Developmental Test and Evaluation (DT&E) and approval at the Readiness Review Board (RRB).

4.1.2. For emergency changes requiring short turnaround to support launch activities, an Engineering Change Proposal Message (ECPM) can be used as the entry instrument for the operational acceptance process, as defined in **Paragraph 4.2**. of this instruction. Emergency changes are those items required for launch or personnel safety that could not be completed in time to support the launch/safety issue under the normal modification process.

4.1.3. Operational Acceptance Testing (OAT), as required, is accomplished by the 45 RANS. At the direction of HQ AFSPC/A3T, Force Development Evaluation (FDE) may be accomplished by the 17th Test Squadron (17 TS). It is not the intention for OAT to duplicate FDE if FDE accomplishes all required testing.

4.1.4. The O&M organization reviews the test results and documentation for the new or modified ERIS and submits an analysis of suitability, effectiveness, and limitations to the Operational Acceptance Board (OAB) with a recommendation for operational acceptance.

4.1.5. The OAB members review the analysis and make an operational acceptance recommendation to the Chair. The Chair makes a decision for acceptance, rejection, or conditional acceptance.

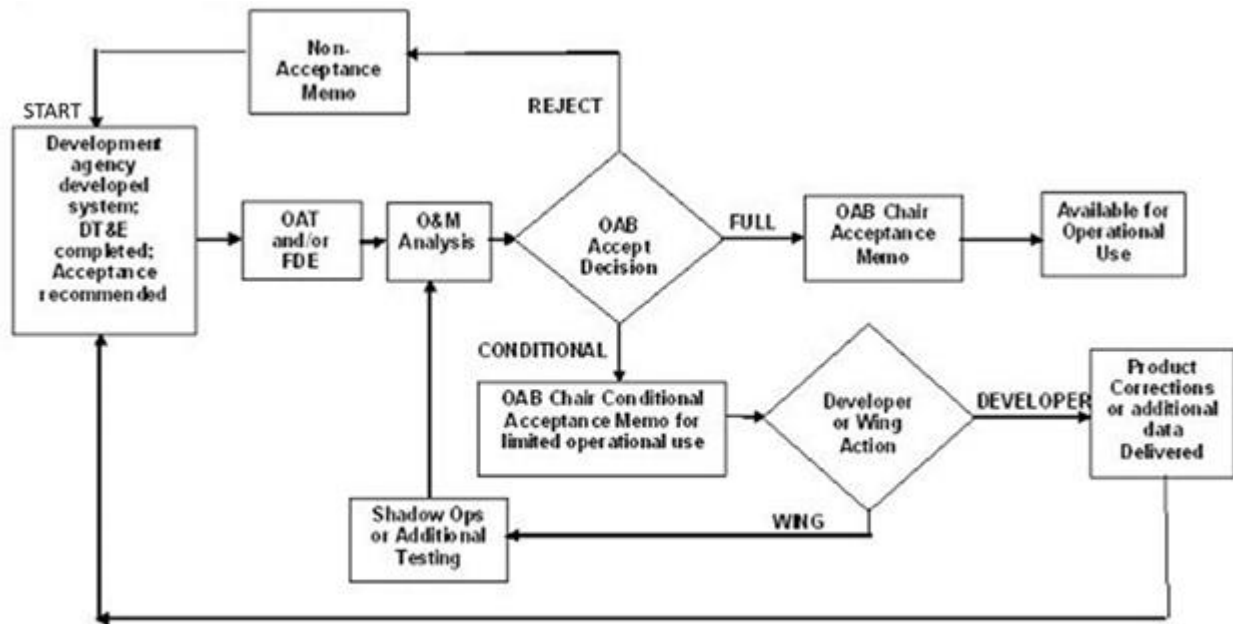
4.1.6. If the OAB grants acceptance, 45 RANS issues an Operational Acceptance Memorandum with or without operational user restrictions. 45 RANS will insure that the operational assets and any restrictions are entered into the System Configuration Acceptance Database (SCAD).

4.1.7. If the OAB rejects acceptance, 45 RANS issues a Non-Acceptance Memorandum to the development agency for corrective action. Additional development may be accomplished, DT&E performed, and/or data supplied. When complete, the development agency continues the operational acceptance process as defined in **Paragraph 4.1.1.** of this instruction.

4.1.8. The 45 OG/CC or 45 SW/CC may elect to make the acceptance decision in selected instances. If the system being accepted is under the operational control of an organization within the 45 OG, but not 45 RANS, 45 RANS will forward the decision package and recommendation to the 45 OG/CC for decision. If the system being accepted is under the operational control of a 45 SW organization outside the 45 OG, 45 RANS will forward the decision package and recommendation to the 45 SW/CC for decision. 45 OG/CC or 45 SW/CC can then make the operational acceptance decision, or the decision authority can be delegated back to the 45 RANS/CC.

4.1.9. If the OAB grants conditional operational acceptance, 45 RANS issues a Conditional Acceptance Memorandum. Reasons for Conditional Acceptance include but are not limited to the following: corrections of known deficiencies, shadow operations, additional operational testing, and/or logistics issues. Conditional acceptance assumes that additional work will be performed to correct conditional acceptance issues. When corrections are made, the development agency continues the operational acceptance process as defined in this instruction. Organizations only requesting conditional acceptance will submit all information normally required for requesting full operational acceptance. However, all limitations must be clearly identified and the request for conditional acceptance versus full operational acceptance will be clearly state.

Figure 1. Standard Operational Acceptance Process.



4.2. The 45 SW ECPM Acceptance Process (Figure 2) is the process for accepting emergency changes to ERIS to support launch operations. Criteria for the use of ECPM's are that they will be:

- 4.2.1. Used only when there are no other alternatives to satisfying mission requirements.
- 4.2.2. Used only for urgent situations where there's a real or potentially significant impact to operations or personal safety.
- 4.2.3. Used only when the proposed fix does not introduce new problems, and is the minimum necessary action to correct the problem or modify the system.

4.3. The O&M organization initiates the System Access Authorization (SAA) to obtain the authorization to break configuration, if applicable, and sends a copy of the ECPM to the Configuration Manager for the ER.

4.3.1. The O&M organization makes the required changes to the designated system, performs the required test activities to validate that installation is complete and correct, and provides test results.

4.3.2. The O&M organization notifies the 45 RANS/MSO the change has been completed and submits the draft change.

4.3.3. The 45 RANS/MSO evaluates the test results and after consultation on Ranges Safety issues with the STA and MFCO, determines whether all change actions are complete.

4.3.4. If 45 RANS/MSO requires additional information before approving the requested changes, the ECPM is returned to the O&M organization for further refinement. After making any necessary changes, the O&M organization resubmits. .

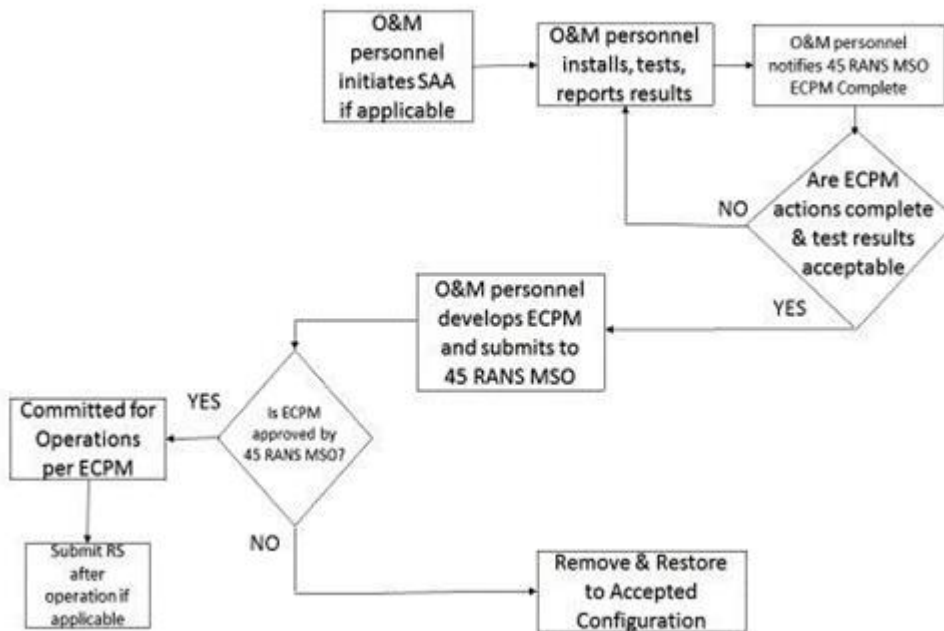
4.3.5. If 45 RANS/MSO determines all required actions are completed and test results are acceptable, they approve the ECPM to meet short notice changers to the ER to support a specific mission. The approved ECPM is disseminated to stakeholders for that mission.

4.3.6. The 45 RANS/MSO reviews the ECPM and after consultation on Range Safety issues with the STA and MFCO, makes a decision to approve or reject the proposed change.

4.3.7. If 45 RANS/MSO approves the ECPM, then the modification is committed for Operations per ECPM and Requirement Statement (RS) will be submitted after operation, if applicable.

4.3.8. IF 45 RANS/MSO does not approve the ECPM, then the modification is removed and restored to an accepted configuration.

Figure 2. The 45 SW ECPM Acceptance Process.



4.4. The 45 SW Rescind Acceptance Process ([Figure 3](#)) is the process for removing ERIS components from operational use.

4.4.1. The developer or other agency recommends removal of an ERIS component from operational use.

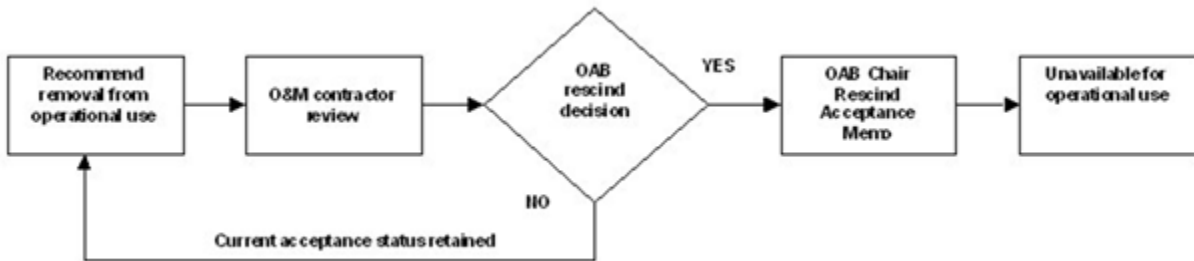
4.4.2. The O&M contractor reviews the submitted recommendation. Following review, O&M contractor forwards their recommendation to the OAB.

4.4.3. The OAB members review the recommendation and make an operational rescind acceptance recommendation to the Chair. The Chair makes a decision to rescind acceptance or to retain the current operational acceptance status.

4.4.3.1. If the OAB rescinds acceptance, 45 RANS issues a Rescind Operational Acceptance Memorandum. 45 RANS will insure that the operational asset's status is entered into the SCAD and properly dispositioned.

4.4.3.2. If the OAB retains current operational acceptance status, 45 RANS issues a memorandum to the developer or other agency that made the rescission request.

Figure 3. The 45 SW Rescind Acceptance Process.



DOUGLAS A. SCHIESS, Brigadier General, USAF
Commander

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

AFSPCI 10-605, *Operational Acceptance Process*, 20 Jun 2016

45SWI 21-104, *45 SW Eastern Range Instrumentation Requirements Process*, 28 Sep 2007

AFI10-601 AFSPCSUP, *Operational Capability Requirements Development*, 3 Jul 2019

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

17 TS—17th Test Squadron

45 RANS—45th Range Squadron

45 SCS—45th Space Communications Squadron

45 SW—45th Space Wing

45 SW/SE—45th Space Wing, Wing Safety

45 WS—45th Weather Squadron

ADM—Acceptance Decision Memorandum

DT&E—Developmental Test and Evaluation

ECPM—Engineering Change Proposal Message

ER—Eastern Range

ERIS—Eastern Range Instrumentation System

FDE—Force Development Evaluation

GPS—Global Positioning System

IRR—Installation Readiness Review

LTRS—Launch and Test Range System

O&M—Operations and Maintenance

OAT—Operational Acceptance Test

OAB—Operational Acceptance Board

OPR—Office of Primary Responsibility

PWRR—Project, Workflow, Requirement, and Resource

RRB—Readiness Review Board

RS—Requirement Statement

SAA—System Access Authorization

SCAD—System Configuration Acceptance Database

SLRS—Spacelift Range System

SMC—Space and Missile Center

SWI—Space Wing Instruction

UDS—Universal Documentation System

Terms

Conditional Acceptance—The new or modified system meets some, but not all, current and valid requirements and provides the ER with a beneficial operational capability that is more significant than any operational risk.

Development Agency—The Space and Missile Center (SMC) office that has responsibility for all ERIS development efforts for the future Spacelift Range System (SLRS).

Eastern Range (ER)—The designated area of responsibility for the Air Force Space Command (AFSPC) managed Launch and Test Range System (LTRS) activity for tracking and command/control of missiles, launch vehicles, and specific spacecraft from the Eastern United States.

Eastern Range Instrumentation Systems (ERIS)—Range instrumentation systems are the combination of software, firmware, and hardware operated and maintained by the 45 SW or Air force contractors, and required to perform the 45 SW ER mission. This includes, but is not limited to, radar, telemetry, optics, Global Positioning Systems (GPS), weather, data processing, telecommunications, command and control, display, closed circuit television, monitoring and surveillance, and simulation in implementation with automated information systems to acquire, display, and analyze data collected as instrumentation network in support of ballistic missiles, and other launch and lading systems, aircraft fly-bys, and orbital satellites. It excludes purely administrative systems.

Shadow Operations—A period of time in which a new or modified ERIS is put into operational configuration and used to “shadow” in parallel with an existing system. During this time, additional information is collected and thoroughly analyzed for purposes of determining whether the new or modified system should be operationally accepted. Operational effectiveness and suitability will be included in the information collected.

Unconditional Acceptance—The new or modified system meets all current and valid requirements and provides the ER with a beneficial operational capability that is more significant than any operational risk.