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Maintenance**

**45TH SPACE WING EASTERN RANGE
INSTRUMENTATION REQUIREMENTS
PROCESS**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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OPR: 45 RMS/RMR

Certified by: 45 RMS/CC
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This instruction implements AFSPCI 21-104, Systems Requirements and Implementation Approval Process. It establishes a uniform process to identify, approve/validate, control, prioritize, and provide status of Eastern Range Instrumentation Systems (ERIS) requirements derived from problems or limitations with ERIS, and enhancement to ERIS due to changes in Range or Customer needs. It applies to personnel and agencies of the 45th Space Wing (45 SW) involved in the acquisition, installation, integration, test, evaluation, logistics support, operation, and maintenance of new or modified instrumentation systems on the Eastern Range (ER).

1. References, Terms, Abbreviations, and Acronyms. See [Attachment 1](#).

2. Objectives.

2.1. To provide a uniform process to identify, approve/validate, control, prioritize, and provide status on ERIS requirements derived from problems or limitations with ERIS, and enhancement to ERIS due to changes in Range or Customer needs. The Requirements Process is the method for documenting requirements derived from problems or limitations with ERIS or enhancements to ERIS due to changes in ER or Customer needs.

3. Applicability.

3.1. This instruction applies to ERIS and establishes a uniform process to identify, approve/validate, control, prioritize, and provide status of ERIS requirements and deficiencies.

3.2. This instruction applies to personnel and agencies of the 45 SW involved in the acquisition, installation, integration, test, evaluation, logistics support, operation, and maintenance of new or modified systems on the ER.

3.3. This instruction excludes:

3.3.1. Any modifications to communication requirements submitted via Project, Workflow, Requirement, and Resources (PWRR) (formerly submitted via AF FM 3215) Manager tool. PWRRs are used to submit requirements for items such as administrative telephones, personal computers, commercial circuits, or connections to the networks managed by 45 SCS.

3.3.2. Any modifications to the ER infrastructure submitted on an AF Form 332, Base Civil Engineering Work Request.

3.3.3. Any modifications to the maintenance of a facility not covered by Base Civil Engineering and submitted on a work order.

3.3.4. Reporting of deficiencies identified against systems under development. The Deficiency Report (DR) Process is the method for reporting and handling deficiencies or watch items against products under development. The DR Process is managed by SMC at Los Angeles AFB. References: TO 00-35D-54, Technical Manual USAF Deficiency Reporting and Investigating System and DR Process as implemented in an electronic tool, accessed via the following link: <https://imis.rc.patrick.af.mil/vrvhome/>.

4. Organizational Responsibilities.

4.1. This section details the responsibilities for the ERIS Requirements Process.

4.2. The 45 RMS.

4.2.1. Responsible for establishing and maintaining ERIS requirements process.

4.2.2. The 45 RMS/CC chairs and is the approval authority for the 45 SW Requirements Validation Board (RVB).

4.2.3. Finalizes 45 SW priority for each ER Requirements Statement (RS) prior to submitting to Headquarters Air Force Space Command (HQ AFSPC) or Space and Missile Center (SMC).

4.2.4. Represents the 45 SW at all HQ AFSPC RVBs relating to ERIS.

4.2.5. Responsible for maintaining and administering the Integrated Priority List (IPL).

4.2.6. Provides IPL to 45 Operations Group (45 OG) and RVB members for annual review of 45 SW RSs.

4.3. The 45 SCS.

4.3.1. Serves as 45 SW RVB member to ensure that ERIS requirements that affect 45 SCS managed communications systems and capabilities or that use/interface with 45 SCS systems and equipment are identified, addressed, and prioritized.

4.3.2. Responsible for identifying Information Assurance programs (i.e., EMSEC, COMSEC, COMPUSEC, etc.) for systems that interface with 45 SW Enterprise.

4.4. The 45 SW/XP.

4.4.1. Serves as 45 SW RVB member to ensure that Range Customer program requirements are addressed and prioritized.

4.4.2. Responsible for Program Introductions (PIs) and Statements of Capability (SC) documents to identify ERIS capabilities and shortfalls that impact customer programs.

4.5. The 45 SW/SE.

4.5.1. Serves as 45 SW RVB member to ensure Range Safety requirements are addressed and prioritized.

4.5.2. Identifies ERIS systems and subsystems as Flight Safety Critical.

4.5.3. Identifies requirements that impact the conduct of Range Safety Critical Operations.

4.6. The 1 ROPS.

4.6.1. Serves as 45 SW RVB member to ensure that Universal Documentation System (UDS) and operator requirements are addressed and prioritized.

4.6.2. Responsible for the UDS process and document management except for PIs and SC.

4.6.3. Provides Range Customer interface for ERIS needs.

4.6.4. Assists Range Customers external to the 45 SW by initiating or completing RSs for modifications of ERIS to support customer requirements.

4.6.5. Identifies requirements that impact range scheduling and planning operations.

4.6.6. Identifies requirements that impact 45th Space Wing Military Radar Unit (MRU), range surveillance and flight control operations.

4.7. The 45 WS.

4.7.1. Serves as 45 SW RVB member to ensure meteorological requirements are addressed and prioritized.

4.8. SMC/LRRP.

4.8.1. Serves as 45 SW RVB member to ensure SMC issues with ER RSs are addressed and that an SMC priority is established.

5. Requirements Process.

5.1. The 45 SW Requirements Process (**Figure 1.**), as defined in the following paragraphs, is the process for documenting and approving requirements for new or modified ERIS. Process and timelines are implemented using an electronic tool, accessed via the following link: <https://imis.rc.patrick.af.mil/vrvhome/>. ER RSs approved by 45 RMS and/or HQ AFSPC are defined as 'Validated'.

5.2. Any individual (i.e., Customer) involved with the Range can draft and submit a proposed RS for a requirement derived from a problem, limitation, or needed enhancement to ERIS. This is accomplished by accessing the electronic tool and clicking on the "add new" button under "RS-1320 Requirement Statement" heading. After submittal, the RS is electronically forwarded to obtain 45 SW review, coordination, and approval.

5.3. Operations and Maintenance (O&M) Scope and Funding Assessment.

5.3.1. RSs that are not within the scope of the O&M Statement of Work will be forwarded for 45 SW Assessment by support contractors and the assigned 45 RMS engineer, see paragraph **5.4.**

5.3.2. RSs that are within the scope of the O&M Statement of Work and do not require additional contract funds are implemented by the O&M contractor.

5.3.3. RSs within the scope of the O&M Statement of Work, but not currently funded, must be funded by the 45 SW or Range Customer; otherwise the RS is returned to the Customer. Upon receipt of funding, 45 RMS initiates a Contract Change Request authorizing the O&M contractor to perform the work.

5.3.4. At completion, O&M contractor requests customer buyoff.

5.3.5. 45 SW RVB Chair reviews closure recommendations and either grants closure or returns to O&M contractor.

5.4. The 45 SW Assessment.

5.4.1. A technical assessment is conducted on the proposed RS. The technical assessment ensures RS content is complete and correct. It is accomplished by one or more of the following: Range Technical Services Contract (RTSC) Contractor; Performance Evaluation, Test & Simulation (PET&S) Contractor; SpaceLift Range Systems Contract (SLRSC) Contractor.

5.4.2. The 45 RMS reviews and resolves all technical comments received against the RS. Any changes to the RS during this process are coordinated with the Customer.

5.4.3. The assigned 45 RMS Engineer reviews the RS and provides an approval and priority recommendation to the 45 SW RVB.

5.5. The 45 SW Validation.

5.5.1. The 45 SW RVB members, identified in section 4, review the RS content, technical assessments, and priority and provide approval/disapproval and priority recommendations to the 45 SW RVB Chair via the electronic tool and timelines.

5.5.2. The 45 SW RVB Chair (45 RMS/CC) reviews the RVB recommendations and may update the RS's content and priority. The Chair then either cancels or approves the RS. If approved, the RS is forwarded as follows:

5.5.2.1. Local validation requires all the following criteria to be met: 1) no impact to form, fit, or function; 2) Government estimate less than \$500K; and 3) no Performance Specification level impact. If this criteria is met, there is no requirement for HQ validation and the RS is forwarded to SMC.

5.5.2.2. An RS not meeting local validation criteria is forwarded to HQ AFSPC. HQ either validates the RS and provides a priority or returns the RS to 45 RMS for update or cancellation.

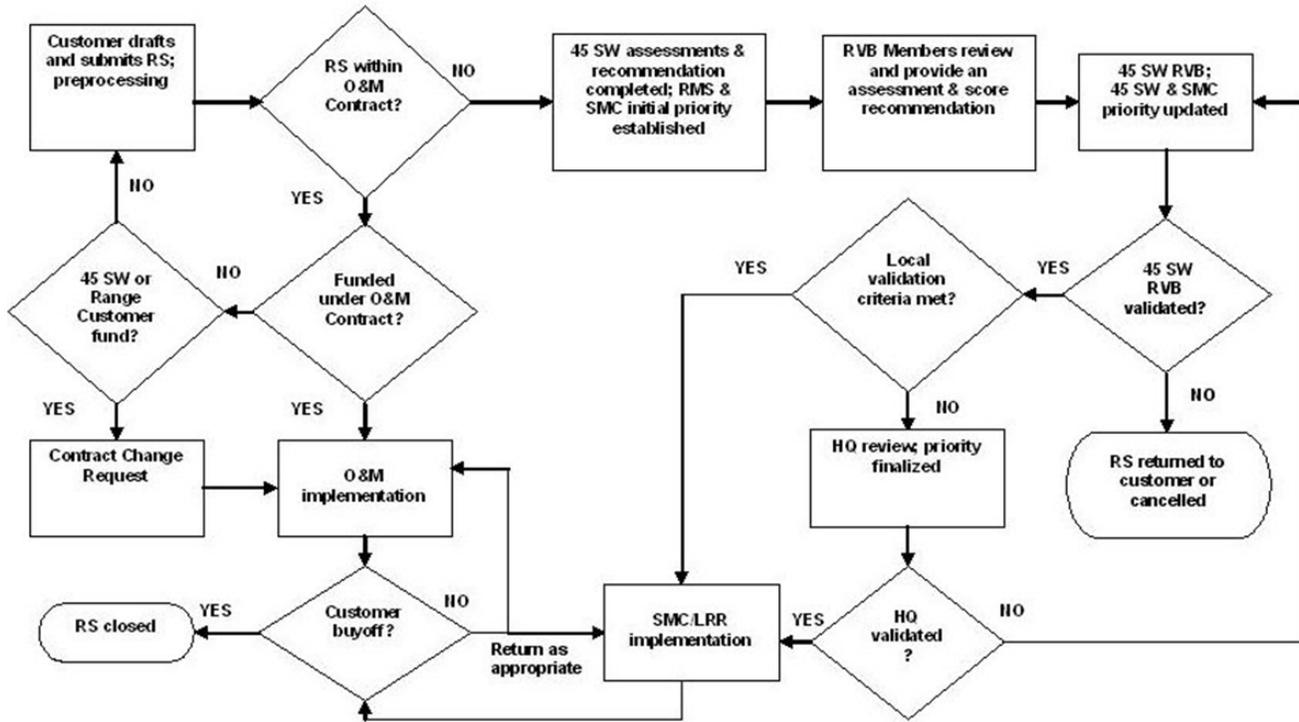
5.6. An RS validated locally or by HQ is submitted to SMC and included in the next HQ AFSPC approved IPL update.

5.7. SMC develops the solution, creates an Engineering Change Proposal (ECP), obtains Configuration Control Board (CCB) approval of the ECP, and implements the solution approved in the ECP.

5.8. SMC resolves the RS then recommends closure via the Readiness Review Board (RRB) and sends the RS to the 45 SW for customer buyoff. The 45 SW performs any additional tests for operational acceptance.

5.9. The 45 SW RVB Chair approves closure or returns RS to SMC.

Figure 1. 45 SW Requirements Process.



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

45 SWI 10-602, **45th Space Wing Eastern Range Acceptance Process**

45 SWI 65-601, **Reimbursement Policy.**

TO 00-35D-54, **Technical Manual USAF Deficiency Reporting and Investigating System, 01 July 2004.**

AFSPCI21-104, **Systems Requirements and Implementation Approval Process.**

NOTE: The user of this instruction is responsible for verifying the currency of the cited documents.

Abbreviations and Acronyms

45 OG—Operations Group

45 SW—45th Space Wing

DR—Deficiency Report

ER—Eastern Range

ERIS—Eastern Range Instrumentation Systems

GPS—Global Positioning System

HQ AFSPC—Headquarters Air Force Space Command

IPL—Integrated Priority List

LTRS—Launch and Test Range System

MRU—Military Radar Unit

O&M—Operations and Maintenance

OPR—Office of Primary Responsibility

PET&S—Performance Evaluation, Test and Simulation

PIs—Program Introductions

PWRR—Project, Workflow, Requirement, and Resources

RMS—Range Management Squadron

RTSC—Range Technical Services Contract

RS—Requirements Statement

RVB—Requirements Validation Board

SLRSC—SpaceLift Range System Contract

SMC—Space and Missile Center

SC—Statements of Capability

SPO—System Program Office

SWI—Space Wing Instruction

TO—Technical Order

UDS—Universal Documentation System

Terms

Eastern Range (ER)—The designated area of responsibility for the 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 required to perform the ER mission. This includes, but is not limited to, radar, telemetry, optics, Global Positioning System (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, analyze data collected as an instrumentation network in support of ballistic missiles, space shuttle and other launch systems, aircraft fly-bys, and orbital satellites.

Integrated Priority List (IPL)—A record containing all validated RSs. The list is published every six months by HQ AFSPC and is given to SMC to assist in determining execution order. The IPL is reviewed semi-annually by all parties. All the contents of the IPL are reviewed according to subsystem such as weather, radar, or telemetry.

Requirements Statement (RS)—Communicates the requirement to request ERIS modification. After validation by 45 SW and/or HQ AFSPC, the requirement is tasked to the System Program Office (SPO) or the authorized implementer(s) to modify the ERIS.

Validated—Signifies that a requirement has been approved by the 45 SW. At this point the requirement is tasked to SMC or O&M for implementation.