

**BY ORDER OF THE COMMANDER  
SPACE AND MISSILE SYSTEMS CENTER**

**SPACE AND MISSILE SYSTEMS CENTER  
INSTRUCTION 63-106**

**11 June 2012**

**Acquisition**

**SPECIFICATIONS AND STANDARDS (S&S)**



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OPR: SMC/ENE

Certified by: SMC/EN (Mr. Thomas Fitzgerald)

Pages: 17

This instruction directs the development, use, and maintenance of specifications and standards (S&S) as an integral element of the Space and Missile Systems Center (SMC) technical baseline in acquisition processes. The appropriately selected and tailored S&S shall be included in all solicitations, placed on contract, managed as part of the technical baseline, and implemented appropriately through the supplier chain, for SMC's total portfolio of launch vehicles, space vehicles, ground systems, user equipment, missile systems, facilities and research. Compliance with this instruction is mandatory for all SMC organizations planning for, acquiring, or managing product support for SMC-developed space and missile systems. Non-compliance with SMC Instruction (SMCI) 63-106 is not punitive under Article 92, or other articles of the Uniform Code of Military Justice. Refer recommended changes and questions about this publication to the Office of Primary Responsibility using the Air Force Information Management Tool (AF IMT) 847, *Recommendation for Change of Publication*; route AF IMT 847s from the field through the appropriate chain of command. 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 located at **<https://afrims.amc.af.mil/>**.

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**1. Introduction.** The use of specifications and standards (S&S) as part of the SMC acquisition process is a key element of the SMC engineering and mission assurance/success initiatives. Sources of S&S include government, Federally Funded Research and Development Center (FFRDC – primarily The Aerospace Corporation), and industry standardization organizations. S&S selected for the technical baseline consider current acquisition and program execution practices, life cycle systems engineering policies/instructions, and new technical knowledge. They will be updated, revised, and tailored as appropriate for use by SMC.

**1.1. Background.** Prior to acquisition reform, use of military S&S in Department of Defense contracts was one of the primary methods/approaches used to define technical requirements, manage contractor performance, and incorporate significant lessons learned. One key element of acquisition reform was to restrict the government from contractually dictating prescriptive "how-to" instructions or processes used by contractor(s). For over a decade this restriction limited and reduced the use of S&S as compliance documents. The unintentional result was the compromise of technical baselines and established/successful processes. Reorganizations and consolidations of units, missions, and facilities, and reductions in assigned government personnel and industry support inadvertently hampered our ability to use lessons learned to prevent repetition of past mistakes. The reintroduction of S&S is not intended to restore the very large number of standards of the past but, rather, to implement standards that are known to reduce acquisition risk and improve overall system/mission effectiveness.

**1.2. Objectives.** The introduction of appropriate S&S into the acquisition stream should assist the SMC acquisition directorates and staff organizations to assure mission success. Failure to implement an effective system acquisition program can range from catastrophic failure of a system to degraded system performance and/or higher sustainment costs. Launch and satellite system failures threaten national security, decrease system operational availability and significantly increase program life cycle cost. Degraded performance of on-orbit satellites reduces in-service duration and system operational effectiveness. Similarly, ground and user platform system-level and component-level problems and design shortfalls can decrease system availability, substantially increase program maintenance costs, and can lead to failures of the military mission. Hence, the effective and efficient insertion of appropriate selected and tailored S&S for system acquisitions early can yield significant benefits. Toward that end, the specific objectives of the SMC S&S program include:

1.2.1. Establishment of a technical baseline for SMC acquisitions including a set of compliance S&S for incorporation into SMC acquisition contracts.

1.2.2. Flexibility in SMC implementation of S&S, based on the needs of each specific contract.

1.2.3. Flexibility in SMC offeror/contractor implementation, including allowing proposal of alternative approaches to meeting the intent of the SMC Compliance S&S.

1.3. **Applicability.** This instruction applies to all SMC acquisition directorates and all new contracts executed by SMC, AFPEO-Space, or AFPEO-Space Launch. The tenets of this instruction should be considered for government sourced/provided goods or services, as applicable.

1.4. **SMC S&S Policy.** This SMC policy mandates the use of S&S as an integral element of SMC acquisition, contracting, and program management. A list of high-priority critical S&S has been established for use in the acquisition process that address the technical practices for ensuring mission success and effective program management

1.5. **SMC S&S Compliance Standards Overview.** SMC/EN is responsible for the development, coordination, and maintenance of the master list of SMC compliance S&Ss, which is published as the Compliance Documents for SMC Acquisitions, hereafter referred to a “SMC Compliance Standards”. The SMC Compliance Standards list shall be appropriately selected, tailored, and used in all new acquisitions, including new contracts on legacy programs, and on legacy programs to modify existing contracts. SMC acquisition directorates and staff organizations may tailor the SMC Compliance Standards list, or the S&S themselves, in accordance with the unique characteristics/requirements of their specific acquisition. The most current SMC Compliance Standards list can be found on the SMC/EN Livelink site (<http://smclivelink.losangeles.af.mil>, select Enterprise, Information Library, and Process Asset Library) or can be requested from SMC/ENE via the SMC/EN workflow. The SMC Compliance Standards list is updated periodically, as required. Notice of update will be sent to all SMC acquisition Directors, Chief Engineers, EN/PI Division Chiefs, as well as to applicable FFRDC and technical support contractors, space-related government organizations, and space-development industry partners.

## 2. Organizational Roles and Responsibilities related to S&S.

### 2.1. SMC Commander – SMC/CC

2.1.1. Approve and direct space system acquisition policy formulation and its implementation.

2.2.2. Provide resolution of S&S and acquisition policy disagreements, as required.

### 2.2. Program Executive Officers (PEOs) – AFPEO Space and AFPEO Space Launch

2.2.1. Implement this S&S policy on respective SMC acquisition programs and contracts.

2.2.2. Provide resolution of S&S implementation disagreements, as required.

### **2.3. SMC Directorate of Engineering - SMC/EN**

- 2.3.1. Establish and maintain the master SMC Compliance Standards list.
- 2.3.2. Manage the configuration of approved S&S and SMC commanders policies or SMC Instructions.
- 2.3.3. Identify the organization responsible for S&S development/revision within each S&S technical area.
- 2.3.4. Assess need for, facilitate and participate in development of, review, and approve new or revised S&S.
- 2.3.5. Prepare processes for implementation of S&S in RFPs, source selection, and contracts.
- 2.3.6. SMC/EN will support source selection, when requested, for review of Offeror(s) proposal in the area of S&S.
- 2.3.7. Review, jointly approve with acquisition directorate, archive agreements for, and verify compliance with SMC acquisition directorate tailoring of the SMC compliance standards list, and tailoring of standards within, on SMC acquisition RFPs and contracts, with specific emphasis on the Acquisition Strategy Document and/or Acquisition Strategy Panel briefings, final RFP, and initial contract. Additional S&S reviews may be made throughout the life of an SMC contract to ensure compliance with acquisition directorate and SMC/EN S&S agreements.
- 2.3.8. Maintain database of S&S and tailoring in use on all SMC contracts.
- 2.3.9. Interface with other space system developing agencies and the contractor community for coordination and continuous improvement of S&S programs.
- 2.3.10. Interface with industry and affiliated government organizations to coordinate discussions and document reviews when authoring/revising standards, and address comments in a timely manner.

### **2.4. Acquisition Center of Excellence (ACE) – SMC/PI**

- 2.4.1. Provide acquisition schedule information as input to the standards needs analysis effort.
- 2.4.2. Provide the acquisition directorates with the SMC Compliance S&S list at the inception of a new acquisition preparation activity for proper integration of the tailored and approved list of S&S into the acquisition package and contract.
- 2.4.3. Ensure S&S requirements and standards are integrated into acquisition strategy documents and Request For Proposal (RFP) sections L&M as appropriate

## 2.5. SMC Acquisition Directorates

- 2.5.1. Implement S&S in accordance with this instruction.
- 2.5.2. Provide access to program acquisition documents to staff organizations executing the SMC S&S program.
- 2.5.3. Establish cooperative working relationship and participate actively in the SMC/EN S&S review and approval process for acquisition contracts.
- 2.5.4. Conduct analyses required to prepare recommended selection and tailoring of S&S for each new acquisition contract, or beneficial impacts to existing standards if there is a major re-baseline of existing contracts, considering the following options for each standard:
  - 2.5.4.1. Not applicable to this contract. (Specify the rationale)
  - 2.5.4.2. Use standard as is.
  - 2.5.4.3. Tailor standards for this contract. (Specify the tailoring details)
  - 2.5.4.4. Use contractor command media [internal, configuration-managed, technical direction] in lieu of specific standard. (Document the supporting technical analysis)
  - 2.5.4.5. Use accessible/deliverable data or plan, including update of existing data item or plan, in lieu of specific standard. (Specify the rationale)
  - 2.5.4.6. Use alternative standard. (Specify the alternative and document the supporting technical analysis)
- 2.5.5. If requested by acquisition Director or SMC/EN, participate in or conduct assessment of heritage programs or existing contracts to identify and consider potential opportunity benefits of implementing S&S or S&S alternatives..
- 2.5.6. Document conclusion of S&S analyses/decisions and agreements with SMC/EN in the Acquisition Strategy Document, Acquisition Strategy Panel briefing, and in discussions with senior leadership at the Acquisition Strategy Panel(s).
- 2.5.7. Ensure implementation of S&S decisions/agreements in the final RFP, source selection criteria and evaluation, and contract.
- 2.5.8. After a Source Selection, Directorates will provide SMC/EN with any deviations and rationale from the formally agreed S&S list in the RFP. Directorate's are encouraged to include SMC/EN on source selection team, if needed.

## 2.6. SMC Staff Organizations - e.g. SMC/PIL, SE.

- 2.6.1. Participate actively in the SMC Compliance Standards list review and approval process.
- 2.6.2. Support impact studies, coordination, resolution, and approval actions involving S&S.
- 2.6.3. Provide leadership in the development and revision of S&S within the technical area of each staff organization.
- 2.6.4. Upon request of SMC/EN, review and comment S&S being newly developed or revised that may not be directly within the staff organization's technical area.

### 3. Development of SMC Compliance Standards.

3.1. **S&S Working Group (S&SWG).** The SMC S&S program is executed by the SMC/EN S&S Working Group (S&SWG). The SMC S&SWG is chaired by the SMC Chief Systems Engineer, who is designated by Department of Defense document number SD-1, *Standardization Directory*, as the SMC Standards Executive. The Executive Committee, comprised of the SMC Chief Systems Engineer and senior members of The Aerospace Corporation's Engineering and Integration Division, closely coordinates with the SMC Engineering Council to assure proper implementation of current SMC management objectives. SMC/ENE support personnel execute the SMC S&S program with the support of subject matter experts (SMEs), as required.

3.1.1. Charter/Purpose. The S&SWG ensures the development, use, and maintenance of S&S as an integral element of SMC acquisition processes. The S&SWG will define, coordinate, and maintain the SMC Compliance Standards.

3.1.2. Executive Committee Functions and Responsibilities.

3.1.2.1. Coordinate S&S activities and team responsibilities.

3.1.2.2. Identify a pool of SMEs for each technical and program management area.

3.1.2.3. Identify team leads and members for specific S&S activities.

3.1.2.4. Establish S&SWG process(es).

3.1.2.5. Review S&S activities (current and proposed) for applicability, prioritization and funding.

3.1.3. S&SWG Membership. Core membership will be approved by SMC Chief Systems Engineer and may be augmented as required from resources available to SMC, including members of SMC acquisition directorates and staff organizations, The Aerospace Corporation, and SMC technical support contractors. Responsibilities include, but are not limited to, management and assistance in the preparation of new/revised S&S and recommended tailoring. Sources include military standards (including cancelled standards), other government standards including SMC standards, industry standards, technical society standards, and international

standards.

3.1.4. Subject Matter Experts (SMEs). SMEs are specialists in technical disciplines who can render authoritative and definitive judgment on technical processes and criteria. SMEs will be identified from resources available to SMC, including The Aerospace Corporation Engineering and Technical Group (ETG) or acquisition directorate-support personnel, or other government personnel. SMEs can also be solicited from the contractor community. SMEs are tasked to conduct the following types of activities:

3.1.4.1. Analyzing failures, major anomalies, major delays for use in prioritization and correlation with S&S.

3.1.4.2. Providing lessons learned data and implications for center-wide S&S.

3.1.4.3. Support SMC/EN (and other space-related agency) processes for prioritizing and approving S&S and policies.

3.1.4.4. Author and/or review draft and final S&S.

3.1.4.5. Support acquisition teams in specific areas of technical expertise.

3.1.5. S&SWG Interfaces. S&SWG members will interface with a variety of SMC acquisition-related activities in the course of their responsibilities, including:

3.1.5.1. SMC Engineering Council – senior advisory panel.

3.1.5.2. SMC acquisition directorates and staff organizations.

3.1.5.3. The Aerospace Corporation and technical experts from the SETA/SE&I and development contractor communities.

3.1.5.4. SMC Acquisition Center of Excellence (SMC/PI ACE).

3.1.5.5. SMC/EN Engineering Acquisition Support Team.

3.1.5.6. The Aerospace Corporation S&S Community of Practice (CoP).

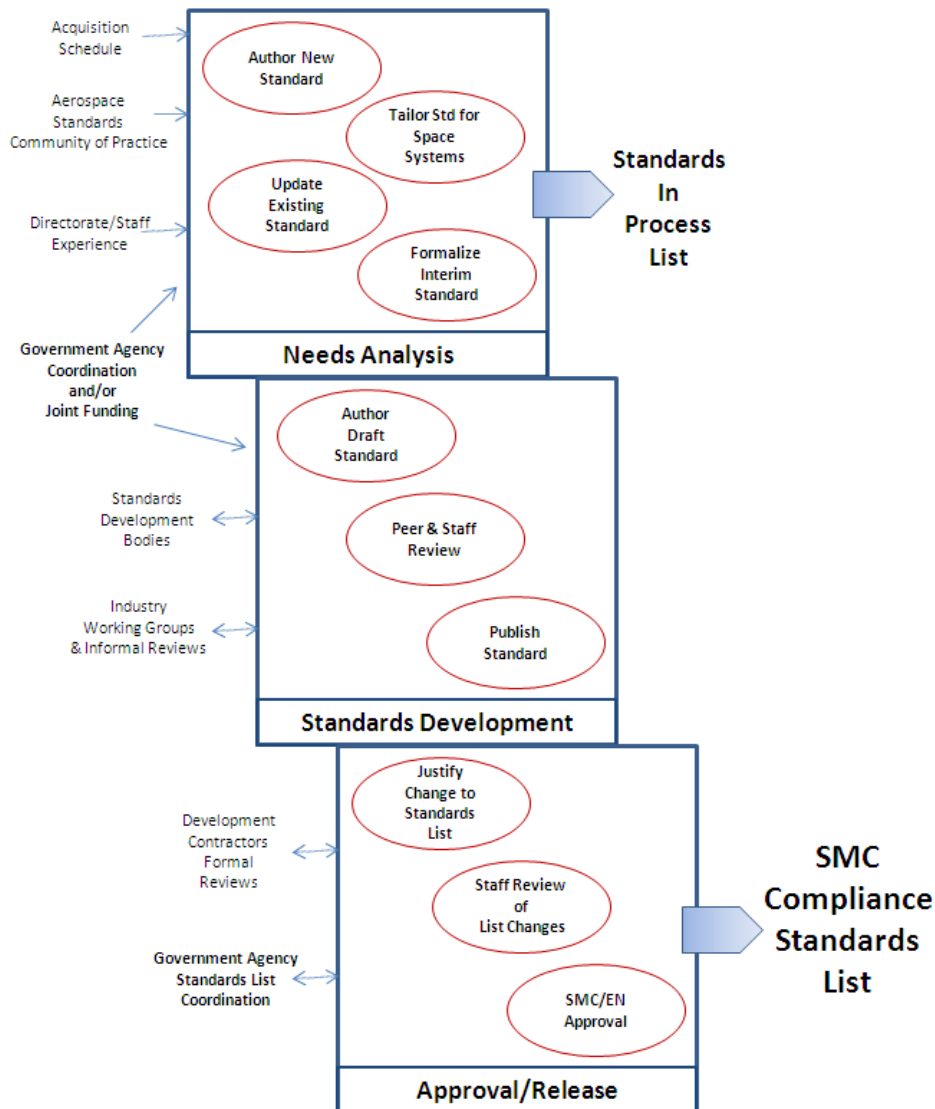
3.1.5.7. Space Quality Improvement Council (SQIC) and other industry forums or associations.

3.1.5.8. Other National Security Agencies, e.g., NRO, MDA, NASA, etc.

3.2. **SMC Compliance Standards List Development Process.** SMC standards provide contractor requirements only; government requirements are to be documented in DoD, USAF, major command, and/or SMC Instructions. Each standard will include appropriate contractual language, i.e., shall, and concentrate on the inclusion of requirements rather than philosophy or prescriptive

processes. Figure 1, *Summary of SMC Compliance Standards Development Process*, depicts the overall SMC compliance standards development process. There are two published products generated by this process: SMC Compliance Standards List and a Standards-in-Process list. The Standards-in-Process list is coordinated with NRO since most standards development is either jointly funded, or performed by SMEs who serve both communities. The SMC S&SWG facilitates and manages the process. It includes participation and coordination of SMC acquisition directorates, SMC Staff Organizations, NRO, The Aerospace Corporation, industry activities, and professional societies.

**Figure 1. Summary of SMC Compliance Standards Development Process.**



3.2.1. Analysis of Critical Functional/Technical Areas. Documents to be considered for nomination and approval for inclusion in the SMC Compliance Standards list must address:

3.2.1.1. Design criteria that contribute to mission success, especially addressing technical

areas that have caused (or likely to cause) failures, anomalies, launch delays, limited system life expectancy, reduced system performance, or excessive rework.

3.2.1.2. Technical management practices that contribute to program execution success and implement: proven “best practices”, government insight into program performance and status, and improved risk reduction.

### 3.2.2. Perform Critical Needs Analysis

3.2.2.1. Needs analysis may be a formal, independent analysis or may result from other sources of knowledge, including inter-agency standardization efforts, input from SMEs, input from SMC staff or acquisition directorates based on acquisition experience, or recommendations from industry.

3.2.2.2. Upon determination of a need that should be filled, a work plan will be established for the updating effort prior to committing to any significant review or revision efforts.

3.2.2.3. Specifications or standards on the SMC Compliance Standards list that no longer meet the critical needs criteria will be nominated and considered for deletion. Any critical needs area not currently included, or determined to be inadequate, will require nomination of existing or new standard(s) to fill that need.

### 3.2.3. Generating the SMC Compliance Standards list.

3.2.3.1. The SMC Compliance Standards list will be periodically reviewed and updated as significant changes occur, or at a minimum of once a year.

3.2.3.2. All specifications or standards nominated for, or included in, the SMC Compliance Standards list must be supported by the criteria delineated in sections 3.2.1 and 3.2.2.

3.2.3.3. Document types eligible for inclusion in the SMC Compliance Standards list include: military S&S (active or cancelled); industry standards documents, e.g. ISO, GEIA/TechAmerica, AIAA; Space and Missile Systems Center Standards; or The Aerospace Corporation publications, i.e. Technical Operating Reports (TORs) or Technical Reports (TRs), that are specifically written as standards.

3.2.3.4. The impact of additions, equivalent/replacement, or deleted standards to the SMC Compliance Standards list will be subjected to the scrutiny of the appropriate technical or acquisition SMEs.

3.2.3.5. Proposed changes to the SMC Compliance Standards list will be coordinated with the staff organizations that are stakeholders, including Logistics, Safety, and Program Protection. Each organization with whom this list is coordinated will be solicited for a coordination signature indicating concurrence, concurrence with comments, or

non-concurrence.

3.2.3.6. Resolution to any coordination resulting in either concurrence with comments or non-concurrence will be moderated by the SMC Chief Systems Engineer. Any issues that cannot be resolved to the satisfaction of all parties will be elevated to SMC/EN for discussion of the technical issues and a binding resolution.

3.2.4. The signature authority for the SMC Compliance Standards list is the SMC/EN.

#### **4. SMC S&S Information Management.**

4.1. **Compliance Documents Archive.** The archive of SMC Compliance S&S and access to these archives will be provided to all SMC acquisition directorates and Staff organizations. The S&S archive will include:

4.1.1. SMC Compliance Standards list, and Standards in Process list.

4.1.2. Approved SMC compliance documents, present and past, including associated reports published by The Aerospace Corporation.

4.1.3. Status of SMC Compliance Standards program.

4.1.4. SMC S&S program governance documents .

4.1.5. SMC S&S program process and support tools.

4.2. **S&S Document Distribution.** The approved SMC Compliance Standards list will be disseminated on the widest possible basis. SMC/EN's primary method of internal distribution is USAF LiveLink in a repository established and maintained by SMC/EN. Access will be provided to all SMC acquisition directorates and staff organizations. An informational message will be provided to all SMC acquisition directorates and staff organizations through their official workflows. The Aerospace Corporation (hereafter referred to as "Aerospace") will publish a Technical Operating Report (TOR) documenting the signed SMC Compliance Standards list, S&S program status, summary of changes from the prior version, and list of standards-in-process that may result in a future update to the SMC Compliance Standards list. An additional Aerospace TOR, in the form of a compact disc (CD), will be published containing the distributable S&S documents comprising the SMC Compliance Standards list.

4.2.1. The Aerospace TORs will be distributed to: The Aerospace Corporation personnel supporting SMC Staff, acquisition directorates or standards development activities; SMC EN personnel; SMC acquisition directorate and Aerospace Chief Engineers; SMC SETA/SE&I contractor support community; other National Security Space agencies; and contractors/industry including SMC prime contractors, subcontractors and vendors.

4.2.2. Each organization receiving a copy of the SMC Compliance Standards list, notification of update, or Aerospace TOR documenting the SMC S&S Program shall disseminate the list

throughout their respective organization. SMC directorates may request a licensed copy of industry standards for exclusive use by the directorate from SMC/EN. Copies will be provided if SMC/EN has licensed copies available, otherwise the SMC directorates will need to obtain a licensed copy from the appropriate source (e.g. industry association or document clearinghouse). SMC-licensed copies of commercial standards cannot be provided to contractors or placed in a bidder's library for open use.

**4.3. RFP/Contract S&S Profile Repository.** The SMC Compliance Standards that for each RFP will be archived in an on-line repository by SMC/EN to document the S&S implementation activities and outcomes. This archive will include all tailoring, waivers, as well as changes made during negotiations for the initial contract award or during contract execution.

**5. Process for Application of SMC Compliance Standards.** The application of S&S to acquisitions begins with the approved set of compliance standards (SMC Compliance Standards) which are customized to match the acquisition program's objectives, taking into account cost, schedule and any other constraints. This involves SMC/EN working with each SMC acquisition directorate chief engineer. The SMC/EN will review the final S&S list which will establish the S&S baseline for the acquisition contract. SMC acquisition directorates shall coordinate S&S tailoring activities for each RFP with SMC/EN and SMC/PI, beginning early in the RFP development and continuing through issuance of the contract. The tailoring process includes selection of applicable standards from the SMC Compliance Standards list as well as detailed tailoring of the individual standards. The SMC Compliance Standards list in effect at the time of the contracts' final two-letter Acquisition Strategy Panel (ASP) shall be used. Additional compliance standards may be proposed by the acquisition directorate to meet program-peculiar requirements, which will be subject to SMC/EN concurrence as are the SMC compliance standards. Tailored S&S by SMC acquisition directorates must maintain the intent and spirit of the SMC S&S program in terms of both relevancy and sufficiency. This includes tailoring of the SMC Compliance Standards list and additional program-peculiar standards, tailoring of the requirements within individual S&S, or use of contractor-proposed tailoring or alternative standards identified during the draft RFP process or industry days. The specific tailoring of the SMC Compliance Standards list and individual S&S to be invoked in each particular acquisition is subject to the review and approval of the SMC Chief Systems Engineer.

**5.1. Specifications and Standards in RFP Development.** SMC/EN will facilitate and coordinate the application of SMC Compliance Standards list to SMC acquisitions. In all cases, but especially when a contract inherits an existing baseline of technical practices or standards, specific consideration will be given to achieving the best balance between technical rigor, mission assurance/success goals, budget realities, Center or higher-headquarter goals/initiatives, and the probability of programmatic success. The associated process steps include:

5.1.1. Determine applicable SMC technical baseline compliance documents for use in specific acquisitions.

5.1.2. Review and evaluate acquisition program documents relative to specific SMC acquisition contracts.

5.1.3. Review and evaluate recommended tailoring of SMC Compliance Standards list

documents.

5.1.4. Document and maintain records of standards-related decisions, tailored standards, and rationale in accordance with current local practices of comment resolution and records management.

**5.2 Scope of RFP Discussions.** The following support products and activities are available to SMC acquisition directorates and/or ACE to facilitate the development of acquisition packages:

5.2.1. SMC Compliance Standards list;

5.2.2. SMC Compliance Standards documents from the SMC Compliance Standards list and sources for copyrighted or limited distribution documents;

5.2.3. References from SMC/EN for recommended SMEs;

5.2.4. SME review of program-specific selection/tailoring of standards from the SMC Compliance Standards list, including additional standards proposed to be added by the acquisition directorate;

5.2.5. SMC/EN review of the completed standards selection/tailoring for specific SMC acquisition contracts.

**5.3. Acquisition Directorate and SMC/EN Discussion of Acquisition Details.** SMC SPOs will provide program documentation and brief SMC/EN and other involved staff organizations to begin coordination of standards.

**5.4. Preparation of Compliance Standards and Tailoring for RFPs.**

5.4.1. A list of the recommended compliance standards list for the RFP is developed by selecting from the SMC Compliance Standards list by SMC acquisition directorates and SMC staff organizations to meet the specific objectives.

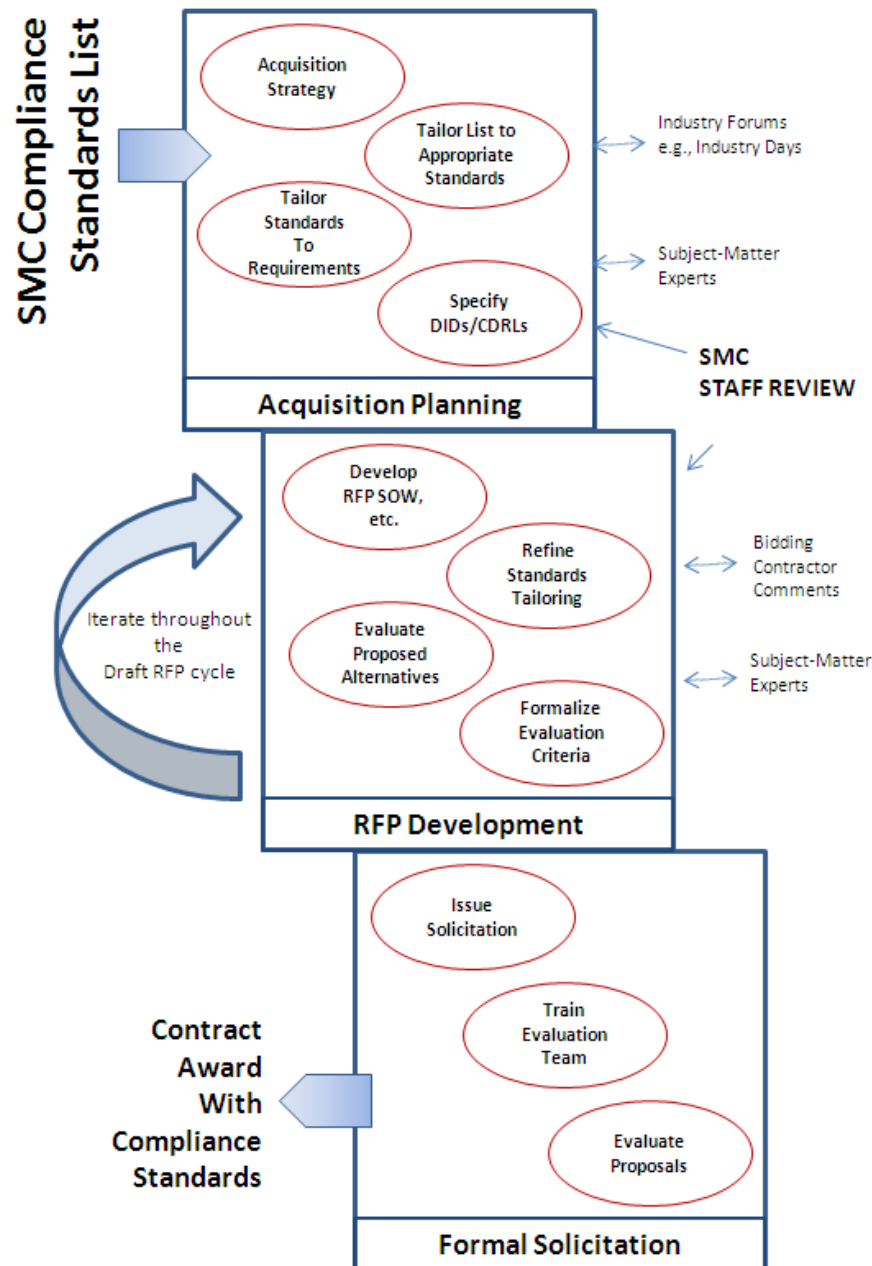
5.4.2. SMEs support SMC acquisition directorates and staff organizations through assisting in tailoring proposed compliance standards.

5.4.3. SMC acquisition directorates and staff organizations documents the S&S selected from the SMC Compliance S&S List, any additional standards added by the acquisition directorate, tailoring of standards, and selection of any reference documents.

**5.5. Coordination/Review of proposed compliance standards for RFPs.** Coordination of S&S and tailoring begins with selection of compliance standards from the current approved SMC Compliance Standards list. This coordination process continues throughout the development of the RFP. Figure 2, *SMC Compliance Standards Implementation Process*, depicts the overall SMC/EN process for including S&S in acquisition documents. The SMC S&SWG facilitates the process. It includes participation and coordination of SMC acquisition directorates, SMC staff organizations,

assistance by The Aerospace Corporation, and responses to draft RFPs by industry. The process progresses through SME review and comment, approval of selected standards and tailoring, culminating in coordination and concurrence by the SMC/EN, SMC/PI and ACE at the ASP, and publication of the final RFP.

**Figure 2. SMC Compliance Standards Implementation Process.**



## 5.6. Source Selection Support.

5.6.1. Tailoring of S&S during the proposal submittal/evaluation phase, such as

contractor-specific implementation approaches (e.g., use of contractor's command media) can be proposed to satisfy the requirements of the specification/standard specified in the RFP. Contractor-proposed tailoring or alternatives must be evaluated by the Source Selection Authority to ensure the government-industrial partnership is appropriately accountable and implements sound technical disciplines meeting the intent of the SMC S&S program. Proof of equivalency provided by the Offeror(s) shall be evaluated to ensure that the intent and technical rigor of the SMC Compliance standard is maintained (See Figure 2).

5.6.2. If Offeror proposed alternatives/implementations are found to be stable and the technical equivalent to the respective SMC compliance standard, the Offeror(s) proposed alternative shall be formally incorporated into the contract as the SMC-approved equivalent compliance document.

5.6.3. All S&S included in the contract shall be monitored and evaluated by the SMC acquisition directorate throughout the acquisition to assure proper implementation.

**5.7. Monitoring S&S Execution During Contract.** SMC/EN shall support the SMC Commander and/or Vice-Commander (SMC/CC/CV) Program Management Reviews (PMRs) to review all technical issues, including assessing the execution of S&S on each program. The acquisition directorate will inform SMC/EN of any technical issues related to the execution of the contractual S&S for a joint resolution or plan of action. The acquisition directorate will inform SMC/EN of any S&S issues to be discussed at formal technical reviews. SMC/EN will support these reviews to independently assess and facilitate resolution of the S&S-related issues. SMC/EN shall, as appropriate, conduct random or periodic monitoring of any SMC contract to assess implantation of the contractually-required S&S.

**5.8. Resolution of Disagreements.** SMC/EN is the principal decision authority for the SMC Compliance S&S program. Should irresolvable differences of opinion occur, elevation of the issue to AFPEO-Space or AFPEO-Space Launch and/or SMC/CC may be required.

5.8.1. Presentations by SMC directorates and staff organizations must include concise statements of: the issue to be resolved; reason(s) for which the issue could not be resolved at the Chief Engineer level; supporting data or study findings, including documentation of impact on the SMC directorate/staff organizations and/or contract execution funding and schedule; and recommended resolution.

5.8.2. The decision of SMC/CC, AFPEO-Space or AFPEO-Space Launch will be final and binding.

## **6. Specifications and Standards Training.**

**6.1. Training Courses.** SMC/EN will prepare and deliver training courses on the SMC S&S program implementation. Course attendance shall be mandatory for SMC and support personnel involved in preparation/revision of standards or the planning, processing, or preparing elements of RFPs. Training course content will include discussions and descriptions of the following:

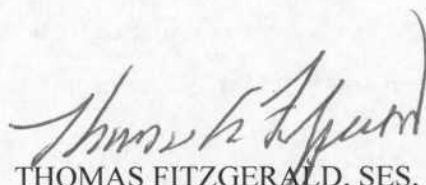
6.1.1. Use & value of standards: in acquisition – How definition of technical requirements helps manage contractor performance.

6.1.2. Incorporating S&S into solicitations for new contracts and modifications to existing contracts – How use of significant lessons learned prevents repetition of past mistakes.

6.1.3. Guidance for tailoring S&S – How standards are customized to support program requirements and objectives.

6.1.4. Evaluating during source selection – How to confirm program requirements and objectives are in RFPs.

6.1.5. Preparing new or revised standards – How to assure standards are technically comprehensive and current state of the art.



THOMAS FITZGERALD, SES, DAF  
SMC, Director of Engineering

## Attachment 1

### Glossary of References and Supporting Information

#### *Abbreviations and Acronyms*

**ACE**—Acquisition Center of Excellence

**AF**—Air Force

**AFMAN**—Air Force Manual

**AIAA**—American Institute of Aeronautics and Astronautics

**CoP**—Community of Practice

**DoD**—Department of Defense

**FFRDC**—Federally Funded Research and Development Centers

**GEIA**—Government Electronics Industries Alliance (now known as TechAmerica)

**IEEE**—Institute of Electrical and Electronics Engineers

**ISO**—International Organization for Standardization

**MDA**—Missile Defense Agency

**NASA**—National Aeronautics and Space Administration

**NRO**—National Reconnaissance Office

**PEO**—Program Executive Officer (also known as AF PEO)

**RFP**—Request for Proposal

**SMC**—Space and Missile Systems Center

**SMC/CC**—SMC Commander

**SMC/CV**—SMC Vice Commander

**SMC/EN**—SMC Engineering

**SMC/PI**—SMC Program Integration

**SMC/PIL**—SMC Logistics

**SMC/SE**—SMC Safety

**SMCI**—SMC Instruction

**SME**—Subject Matter Expert

**S&S**—Specifications and Standards

**SPO**—System Program Office, common name for organizations formally known as Directorate

**TOR**—Technical Operating Report, a report of The Aerospace Corporation

**TR**—Technical Report, a report of The Aerospace Corporation

**UCMJ**—Uniform Code of Military Justice

**USAF (or AF)**—United States Air Force

### *Terms*

**Specification**—<sup>1</sup> A document that prescribes, in a complete, precise, verifiable manner, the requirements, design, behavior, or characteristics of a system or system component. [IEEE 93b]

**Standard**—<sup>2</sup> (a) A document, established by consensus and approved by an accredited standards development organization, that provides for common and repeated use, rules, guidelines, or characteristics for activities or their results, aimed at the achievement of the optimum degree of order and consistency in a given context. [IEEE 91]. (b) Standard practice, process or criteria established by authority, custom, or general consent as a rule for the measure of quantity, weight, extent, value, or quality as a model or example.

**Technical Area**—The taxonomy of technical disciplines use as an organization method in the Compliance Documents for SMC Acquisition list (column 1)

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<sup>1</sup> Software Engineering Institute (SEI). SEI Open Systems Glossary. <http://www.sei.cmu.edu/opensystems/glossary.html>

<sup>2</sup> Software Engineering Institute (SEI). SEI Open Systems Glossary. <http://www.sei.cmu.edu/opensystems/glossary.html>