

DoD Corrosion Prevention and Control

Introducing Products to DoD Utilizing Specifications and Standards

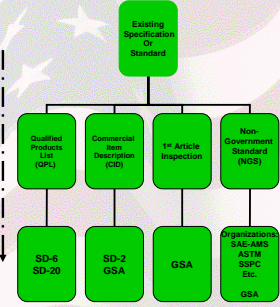
DoD Metal Finishing Workshop
Layton, UT
17 May 2007



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Product Introduction Process for Existing Specifications and Standards

1. Does the product meet the requirements of an existing specification? (YES / NO / MAYBE?)
2. If YES, then what is the product introduction path applicable to the specification?
3. What is the process for the particular path?



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Product Introduction Process

DEFENSE STANDARDIZATION PROCESS

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How are Products covered under the DSP

- **Formal Qualification (Qualified Products List) (SD-20, SD-6)**
 - Performance (PRF) or Detail (DTL) Specification
 - In General, Most Specifications do not have Qualified Products Lists (QPL)
- **Non Government Standard (NGS) (SD-9)**
 - Can be Adopted if Technically Adequate for DoD Needs
 - In General, Most NGS do not have an associated QPL
- **Commercial Item Description(CID) (SD-2, SD-5)**
 - For Existing Suitable Commercial Products where an appropriate NGS Does Not Exist
 - Not Used to Encourage Development of Product (no QPL Testing)
- **Non Developmental Item (NDI) (FAR, SD-2)**
- **First Article Inspection (Acceptance Testing) (FAR)**
- **Purchase Description (SD-2, SD-5)**
 - When preparation and maintenance of a specification is not cost effective
 - For small dollar purchases under \$25,000
 - For one-time buys

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Defense Standardization Program (DSP)

DoD 4120.24M – Goals:

- **To Improve Military Operational Readiness**
 - Interoperability of Systems, Logistics, Reliability, Maintainability, Safety, Modernization and Quality
- **Reduce Total Ownership Cost**
 - Reduction of nonstandard materials, processes and components, Common Processes, Increased Competition, and Reduced Training
- **Reduce Recycle Time**
 - Standardized Items, Identify Interchangeability for New Technologies, etc.

DoD 4120.24M – Functions:

- Establishes the Qualification Program
- Defines how Products are Specified

www.dsp.dla.mil

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What is a Qualified Products List?

SD-20 (Section 5)

- A QPL is a list of products (and their manufacturing site) which have been tested and certified to meet the minimum specification requirements
- A QPL allows the manufacturer to provide and the purchaser to obtain satisfactory pre-contractual evidence that a product meets specification requirements
- QPL's simplify the procurement process and reduce acquisition/procurement lead time
- QPL's reduce test costs by minimizing redundant, long, and expensive tests
- QPL's provide a source for continuous availability of reliable products

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Non Government Standards (NGS's)

Can be adopted when technically adequate to meet government agency needs (4120.24-M, AP 3.6.1)

- Ex: SAE-AMS, ASTM, etc.
- Through participation the government shall ensure that future revisions, amendments, and changes meet agency needs (AP 3.6)
 - Ex: SAE Committee Week
- Not necessary to adopt updates to NGSs (SD-20 Section 8)

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Commercial Item Descriptions (CID's)

(SD-20 Section 8)

- When NGS does not meet Gov. needs a CID or Fed. Std./Spec. may be developed (4120.24M, AP 5.2.1)
- After NGS's the CID is the document of choice for buying commercial products (4120.24M, AP 4.2.1)
- Not used to encourage product development
- For repetitive acquisitions greater than 25k annually (4120.24M, AP 4.2.1.3)
- For small commercial purchases a purchase description could be used (4120.24M, AP 4.2.1.3)

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NDI (Non Developmental Item)

- Previously Developed Item used exclusively for Government Purposes (FAR)
- Any item that needs only minor modification to meet government needs(FAR)
- Items fully developed and in production, but not yet sold and in use (FAR)
- CID preferred over NDI when possible (SD-2)

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First Article Testing

- What is it? SD-20 (Section 8)
 - Is the evaluation of a contractor's initial, preproduction, or sample model or lot to ensure that the product conforms to all contract requirements.
- When is it appropriate? (FAR 9.303)
 - When a manufacturer has not previously furnished the product to the government
 - Product has undergone subsequent changes
 - Production of product is discontinued for an extended period of time
 - Previously procured products have developed problems

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Purchase Description

- What is it? (SD-2, chapter 2)
 - A statement outlining the essential characteristics and functions of an item, service, or material required to meet the minimum needs of the Government These are used to competitively solicit and contract for an item.
- When is it used? (4120.24M, AP 1.73)
 - When a specification is not available or when specific procurement specifications are not required by the DoD
 - For small dollar purchases under \$25,000
 - For one-time buys, when development of a standardization document is not cost effective.

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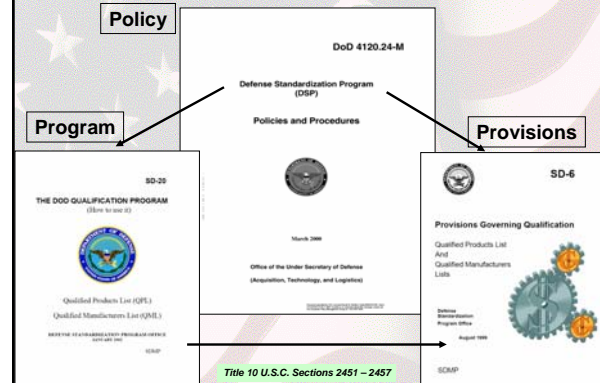
When Not to Standardize

(4120.24 C3.5)

- When Technology is Rapidly Evolving (e.g. Electronics)
- If Design Flexibility/Innovation will be Stifled (e.g. Software)
- Common Commercially Available Items (e.g. Standardization is Not Needed to Ensure Interoperability or Parts Interchangeability)

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Defense Standardization Policy Flow Down



Defense Standardization Program

Example Product Qualification Program

What Is It and How Does It Work?

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Qualification Documents

- SD-20 The DoD Qualification Program
 - How to implement a qualification program
- SD-6 Provisions Governing Qualification
 - Guidelines governing material submission/qualification



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What is Product Qualification?

SD-20 (Section 1)

Product Qualification is a Legal Process

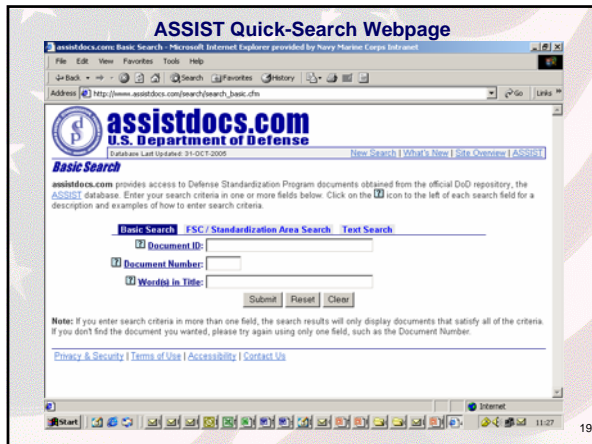
- Process of Testing Products, Processes, and Materials for Conformance to Specification Requirements in Advance of and Independent of a Specific Acquisition
- A Specification is a Document that Describes the Minimum Essential Technical Requirements for a Product, Process and/or Material
- DoD Specifications and Standards can be found on ASSIST (<http://assist.daps.dla.mil/online/start1>)
- Quick Search at www.assistdocs.com
- Product Qualification may not mean Authorization
 - Product use for an application may require additional authorization from the Cognizant Engineering Authority (i.e., lab testing, demonstration/validation testing, etc.)

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ASSIST Quick-Search Webpage



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Qualified Products List (SD-20 (Section 2))

- A QPL is a list of products (and manufacturing sites)
- Meets minimum specification requirements
- Provides a continuous source of reliable products
- QPL's standardize requirements prior to acquisition:
 - All suppliers must meet the same requirements
 - Ensures fair competition for contract bids

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Procurement & Authorization (SD-20 section 10)

- QPL listed product may be procured under any acquisition guidance that calls out the specification
- QPL listing does NOT imply or grant authorization for implementation, outside the boundaries of the technical drawings, manuals, and instructions
- Independent of QPL listing, implementation authorization may be required by the cognizant engineering authority for distinct DoD applications

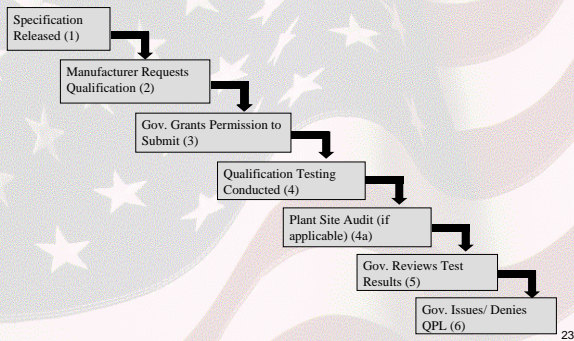
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What Qualification Does Not Do (SD-6 pg 4)

- Does not relieve the supplier of contractual obligation to deliver items meeting all specification requirements
- Does not relieve OEM of contractual obligation to ensure that delivered items comply with all specification requirements
- Does not guarantee acceptability under contract
- Does not waive any requirements for inspections
- Does not waive any requirements for maintaining quality control measures

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QPL BASIC PROCESS FLOW



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Qualification Process Steps (SD-20 section 10)

1. Specification Released
2. Manufacturer Requests Qualification
 - a. Formal Request Via Letter to Qualifying Activity
3. Government Grants Permission to Submit for Qualification
 - a. Formal Permission via Official Qualifying Activity Letterhead from Authorized Signature Authority (Branch Head/Division Head, etc.)
 - b. Letterhead Includes 3 Enclosures
 1. Sample Submission Instructions – How much, Where to Ship, etc.
 2. Copies of the Relevant SPEC/STD and the SD-6 Regulation
 3. Can Also Include the Schedule/Cost Estimate for Testing, Intent/Schedule for Manufacturing Facility Audit

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ABC Company
3571 Any Street
Somewhere, USA
(135) 246-0987
April 3, 20XX

Department of the Testing of Stuff
Attn: Chief Officer
Bldg. 3333, Suite 4444
Anyplace, USA 12345

Dear Mr. Tester,

I request permission to submit samples of our product, "Good Stuff 3", for qualification to MIL-PRF-XXXX, Type Y, Class G requirements; to be evaluated by WE TEST IT Laboratory, Inc.

Sincerely,
Mr. I Sellit
Mr. I Sellit

Sample Manufacturer Request Letter
(SD-6 pg 5)

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Official Letterhead
DEPARTMENT OF THE GOVERNMENT
123 Main St.
Anytown, USA

In Response Refer To:
4123 Ser# x.x
Date

Manufacturer
Attn: POC
Any Street
Somewhere, USA

Dear POC:

Per your request of date, information on procedures for qualification is forwarded as enclosures (1) and (3). Permission is granted to submit samples to XX Labs for qualification testing to MIL-PRF-XXXX, Type II, STUFF, Exterior. Please comply with enclosure (1) for submission of samples for testing.

If you have questions regarding qualification, please contact Mr. U. Sam by phone at (123) 456-7890, or contact this office in writing.

Sincerely,
Authorized Signature Authority

Sample Submission Letter

Traceable Document – Serialized & Dated

Grants Submission – Includes Date of Formal Request or Receipt

References Testing/Qualifying Activity and MIL-SPEC

Identifies Government POC & Contact Information

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In Response Refer To:
4123 Ser# x.x
Date

Manufacturer
Attn: POC
Any Street
Somewhere, USA

Dear POC:

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Please comply with enclosure (1) for submission of samples for testing.

Sincerely,

Sample Submission Info

Submission Instructions (Where/How Much)
Copy of SD-6
Copy of MIL-SPEC

Encl: (1) Submission of Samples for Qualification Testing
(2) Provision Governing Qualification, SD-6 of Aug. 1999
(3) MIL-DTL-XXXX, Type II, STUFF, Gizmo

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Qualification Process Steps (cont'd)

4. Qualification Testing Conducted

- Is the Company the Original Manufacturer or a Distributor (SD-6 pg 5)
 - Distributor will certify authorization from qualified manufacturer to Re-brand
 - The Qualifying Activity May QPL a Re-branded Product without Retesting
- Plant Site Audit (if applicable) (SD-6 pg 12)
 - The Qualifying Activity may inspect the Manufacturing Facility
 - For New QPL/Product, First-time Manufacturer, or for Quality Control at the Government's Discretion
- Testing is conducted according to the Specification by the Qualifying Activity and/or a Certified, Independent Laboratory
 - The Qualifying Activity may Re-qualify an already listed Product based on the Manufacturer's Certification and/or the Manufacturer's Internal Test Data
- Qualifying Activity Will Stop Testing/QPL Process for Products that Fail to Meet Any Specification Requirements (SD-6 pg 13)

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Qualification Process Steps (cont'd)

- Government Reviews Test Results (SD-6 pg 24)
 - Laboratory/testing POC generates product test report
 - Qualifying Activity may perform conformational testing of independent lab results
 - Qualifying Activity's Signature Authority reviews test report
- Government Issues/Denies QPL (SD-6 pg 24)
 - Qualifying Activity issues a product qualification letter
 - Qualifying Activity issues a QPL for Products that meet All Specification Requirements
 - The Qualifying Activity can only waive full qualification to a specification's requirements under one of the following conditions:
 - Mission/Life Critical Need
 - In the Case of a Sole Source QPL

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Sample Qualification Letter
(SD-6 Pg 13)

Official Letterhead

Traceable Document – Serialized & Dated

Manufacturer & POC

Signed by Authorized Signature Authority

DEPARTMENT OF THE GOVERNMENT
OFFICE OF STUFF
PAPERWORK HEADQUARTERS
ANYTOWN, USA 12345

4123
Ser # x.x yyy
date month yyyy

Manufacturer
Attn: POC
Street or PO Address
City, State, Zip

US: POC

This letter is in reference to the qualification of your product, XX-1234-D. We have completed ALL the required testing on the sample submitted by ABC Company. Your product has met the qualification requirements of specification MIL-DTL-XXXX, Type II, STUFF, Aerial Emission.

Listing on the Qualified Product List (QPL) will appear as indicated below. To ensure correct listing, please advise us within 14 days from the date of this letter of any discrepancy.

Government Designation	Manufacturer's Designation	Test or Qualification Reference	Manufacturer's Name and Address
Type II	XX-1234-D	This Letter	ABC Company PO Box 1234 Anytown, NY 12345 <u>Phone:</u> 567 This Street A Bock, XX 67990 8901 That Street B Bock, XX 34679

The following statements are binding upon the manufacturer per the Defense Standardization Manual 4120.2486:
a This listing does not guarantee acceptance of the product in any future purchase.
b This listing does not constitute a waiver of any requirements of the specification

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Reasons for Removal from QPL

(SD-6 pg 20)

- Product No Longer Meets Specification Requirements
- Manufacturer Requests Removal
- Failure to meet a change in the specification requirements
- Change in Manufacturing Process/Location Without Notification
- Product Manufacturing Vendor is Barred/Suspended/Ineligible
- Manufacturer has Violated Advertisement Restrictions
- Performance/Quality/Reliability Problems Are Detected

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QPL Removal Example

- Complaint of material failure from the user in the field
- Investigate alleged material deficiencies
- Retest the material
- Product does not meet the requirements of the specification
- Address the failure with the supplier
- Company can't/won't correct the unacceptable material
- Removal from the QPL

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QPL Removal Example

- Specification is revised and the requirements changed
- A manufacturer's material on the QPL no longer meets the requirements of the spec.
- The Qualifying Activity notifies the manufacturer that their product no longer meets the requirements of the spec.
- The manufacturer notifies the Qualifying Activity that they cannot meet the new requirements of the spec.
- The Qualifying Activity removes the product from the QPL

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Reasons for Re-Qualification

(SD-6 pg 19)

- Any changes to a current QPL product requires approval and/or re-qualification by the qualifying activity
- Adding/moving manufacturing site(s)
- Ingredient/process change
- Product renaming/re-branding
- Management change
- Specification requirements have been modified
- Questionable performance reports

NOTE: Conditions above allow for immediate approval for full re-qualification testing

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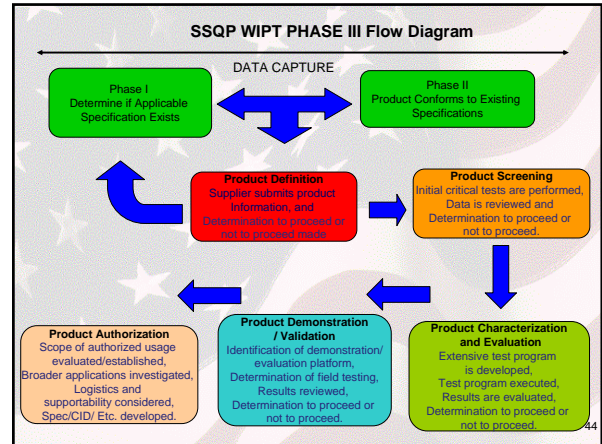
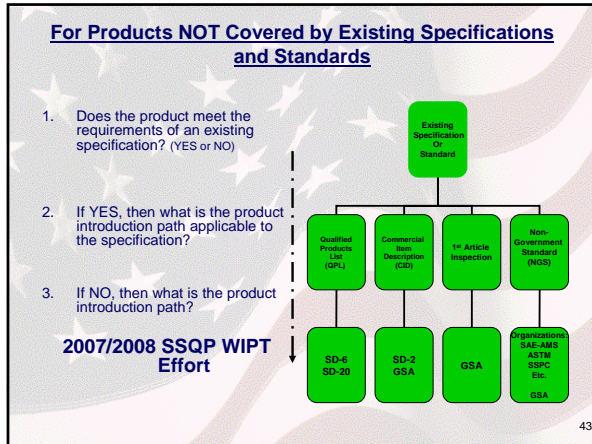
Product is now Qualified

- Product Authorized to be used in any application for which the specification has been approved
- Procurement occurs through standard procurement process

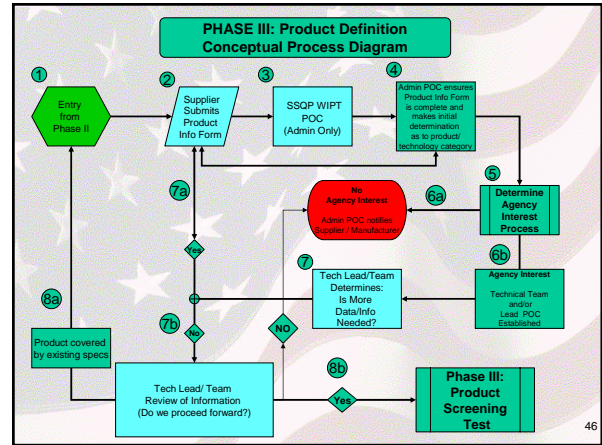
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Information on Selling to the Government (GSA), Military, etc.

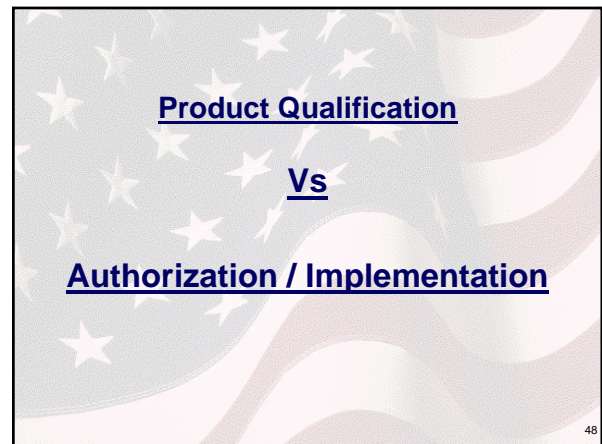
The image displays three screenshots of government procurement websites. The top right screenshot shows the 'Using GSA' page with a red arrow pointing to the 'How to Sell to the Government' link. The bottom left screenshot shows the 'SELLING TO THE MILITARY' page with a globe icon and the text 'OFFICE OF OPERATIONS'. The bottom right screenshot shows the 'DEFENSE' page with a list of links and the text 'Doing Business with the Department of Defense'.



- ### Phase III Sub-processes
- Product Definition
 - Supplier submits Product Information Form via web tool
 - Admin POC ensures PIF is complete and makes initial determination as to product/ technology category
 - Admin POC determines agency interest
 - Agency Interest: Establishes Technical team and or Lead POC
 - No Interest: Admin POC notifies Supplier
 - Tech Lead/Team review information
 - Is more info needed? (contact supplier)
 - Is Product covered by an existing spec? (direct supplier to pertinent spec)
 - Is there agency interest in proceeding? (proceed to product screening)
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- ### Phase III Sub-processes
- Product Definition
 - Product Screening
 - Initial critical tests are performed, data is reviewed by Tech Team and agency interest is evaluated.
 - Product Characterization and Evaluation
 - Extensive test program is developed, test program executed, results are evaluated by Tech Team, agency interest is revisited.
 - Product Demonstration/Validation
 - Identification of demonstration/ evaluation platform, determination of field testing, results reviewed by the Tech Team, agency interest and additional funding issues revisited.
 - Product Authorization
 - Scope of authorized usage evaluated/ established, broader applications investigated, logistics and supportability considered, Spec/CID/ Etc. developed
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Qualification	Authorization
<ul style="list-style-type: none"> - Meets Minimum Specified Requirements (QPL) - Acceptable for where specification is approved for use in Tech Orders, Manuals, Drawings, etc.) - Does not insure/promise procurement (i.e., Must follow standard GSA, DLA, etc. procurement processes) - Qualification does not automatically mean Product Authorization 	<ul style="list-style-type: none"> - Approves Product's use for a specific application - Used for new products or different applications of existing products - Path to Authorization <ul style="list-style-type: none"> - Lab testing - Field prototype - Verification/Validation - Data analysis and use envelope definition - Authorization letter, Local Process Spec, Tech Order or Manual, etc. Issued

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DEPARTMENT OF THE GOVERNMENT
OFFICE OF STUFF
PAPERWORK HEADQUARTERS
ANYTOWN, USA 12345

4123
Ser 4.9.x.x.YYY
Id:manth3999

From: High Muckity Muck, Government
To: Distribution

Subj: Government Implementation Plan for Stuff, Type III Conforming to MIL-STD-XXXX

Ref:(a) Government Implementation Plan for Your Product

(b) Engineering Laboratory Report, "Performance Evaluation of Stuff," LR04_00Z

(c) Engineering Laboratory Report, "Field Testing and Validation of Stuff," LR0Y_00X

(d) Additional Reference Materials

- Reference (a) authorized the use of Stuff qualified to Federal Standard FED-STD-YYYY, for government applications.
- References (b) and (c) contain the results of laboratory and field testing by the applicable federal and military agencies.
- Based on this data, the government extends the authorization in reference (a) to the use and applications described above.
- The points of contact for this issue are Mr. Middle Manager, Department of Paperwork.

Sample Authorization Letter

Applicable Testing and Usage References

Restrictions Governing Implementation and Use

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Generic Authorization/Implementation Requirements

- Implementation Path (generic example for Aerospace products)
 - Lab validation of product, process and performance
 - Field validation of product, process and performance
 - In a relevant operational environment
 - Implementation
 - Applicable Engineering Authority Sign-off
 - Ex: Materials, Structures, Subsystems, Systems, Aeromechanics, Depot
 - Program: Engineering/Logistics/Original Equipment Manufacturer
 - Create or Revise specs and other documentation (Local drawings/Tech orders/MIL/AMS/ . . .)
 - Revise Relevant Control Manuals
 - Supply, NSN, Order Quantities, etc.

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General Implementation Requirements (cont'd) (Criticality of Application)

- Non-Critical Application Test Criteria
 - Lab validation per Spec and/or other agency-specific screening tests
 - Field validation: In-service on planned implementation platforms in representative operational conditions, multiple dem/val sites- same or better performance compared to controls
- Critical Application Test Criteria (Safety of Flight)
 - Lab Validation per Spec and/or other agency-specific screening tests
 - Lab Validation of critical application specific performance (Ex: Structural Fatigue, etc.)
 - Flight clearance depending on component/risk
 - Field Testing: Will be more stringent validation path than for non-critical applications: longer road, more expensive, more sensitive, more extensive

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Summary

- **Qualification is Legally binding on both Government & Industry**
- **Qualification may only be a first step**
- **Generally, Qualification and Authorization are Two Different Processes**
- **Authorization must be obtained on a specific basis if not previously granted**
- **Implementation path can vary widely based on the criticality, the associated risk factors and the Service/Agency specific requirements**

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QUESTIONS??

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