



# NNSA Weapon Quality Division (NA-121.3) R013 Update



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# Procurement Requirements

- NAP 24A
  - CRD: *The Contractor is responsible for flowing down the requirements of this CRD to subcontractors at any tier to the extent necessary to ensure the contractor's compliance with the requirements...The contractor will ensure that it and its subcontractors comply with the requirements of this CRD.*
- Draft NAP 24B Attachment 6
  - Working Group was developing attachment 6 to specify which requirements of NAP 24A would flow to all tier levels of the supply base
- R013 Gate 1 Opened (Nov 2020)
  - Add content (new appendix) to an existing R-doc (R013, Control Supply Chain) for flow down of Quality Management System requirement to M&O Contractor's supply base.
- NAP 401.1A (Jun 2021)
  - NAP 401.1A removed the requirement to flow **all** requirements to subcontractors at **all** tier levels
  - High-level procurement requirements



# NAP 401.1A Procurement Related Changes

## 6.5 PROCUREMENT

DAs and PAs must ensure that purchased product and services conform to specified procurement requirements. The type and extent of control applied to the supplier and the purchased product or service must reflect the effect of the purchased product or service on subsequent product realization or the final product.

- a. The type and extent of control applied to the supplier is determined by applying a graded approach to implementation of the following items across the various approval levels of suppliers:
  - (1) Expectations for a supplier's Quality Management System (QMS)
  - (2) Evaluation, selection, and monitoring
  - (3) Procurement documentation
  - (4) Verification of procured products
- b. PAs must maintain a list of approved suppliers who can provide acceptable products.

...the type and extent of control applied to suppliers is determined by applying a graded approach that will be located in Defense Programs Business Process System (DPBPS) federal requirements document.



# NAP 401.1A Procurement Related Changes Cont.



## WEAPON QUALITY ASSURANCE (WQA) BULLETIN

NNSA WEAPON QUALITY DIVISION (NA-121.3)

December 2020



### How do products become Mark Quality?

A common misconception is that Mark Quality status can be achieved by inspection only. To become Mark Quality, products must be realized through a *Product Realization Process* that includes the following elements:

- Technical requirements are appropriately managed.
- An iterative design process is utilized to mature the design.
- Design Qualification is accomplished to instill confidence that the design meets all requirements.
- Final designs are documented in appropriate product definition sets.
- Product definition is appropriately authorized and released to the Production Agency (PA) and maintained by utilizing appropriate configuration management methods (i.e., using the NNSA document control repository).
- The PA then manufactures the product under the appropriate controls, including the following: (This is why we utilize PAs instead of DAs for manufacturing)
  - Utilizing their ability to retrieve the authorized product definition from the NNSA document control repository.
  - Utilizing work instructions that have been developed to appropriately manufacture the product.
  - Utilizing production equipment (e.g., jigs, fixtures, and molds) and software programs that are appropriately developed and controlled.
  - Monitoring and control of production utilities and supplies (e.g., water, compressed air, electricity, and chemical products) to the extent they affect conformity to product requirements.
  - Monitoring and control of production environments (e.g., humidity, temperature, etc.) to the extent they affect conformity to product requirements.
  - Utilizing the demonstrated ability for the prevention, detection, and removal of foreign objects from the product.
  - Utilizing measuring and test equipment (MT&E) that is appropriately developed and controlled.
  - Utilizing procured products that are verified to meet procurement requirements and that are purchased from approved suppliers.
  - Capturing the evidence that all production and inspection steps have been completed as planned or as otherwise documented and authorized.
  - Executing process prove-in (PPI) to establish the appropriate production environment that is necessary to execute Mark Quality production.
  - Process qualification to control the processes that are yielding Mark Quality products.
- Product is certified by the PA to meet all requirements.
- Product becomes Mark Quality.

These are elements of the *Product Realization Process* that are in place to ensure that quality is built into products. The definition for Mark Quality in the Defense Programs Business Process System (DPBPS) assumes that all of these controls have been put in place prior to the NNSA's or the Delegated Authority's verification that the product meets requirements.



### Weapon Product.

Any product that is realized to assemble into a war reserve (WR) nuclear weapon, Joint Test Assembly (JTA), TYPE weapon, ancillary equipment or assemblies provided for use control. Weapon products are typically identified with an 8-character part number.

### Mark Quality.

Weapon product that is realized within a process that ensures the early and continuous application of quality principles and has been certified by the PA to meet all applicable product requirements.

Procurement Requirements in NAP 401.1A and R013 will only apply to those sites procuring Weapon Product

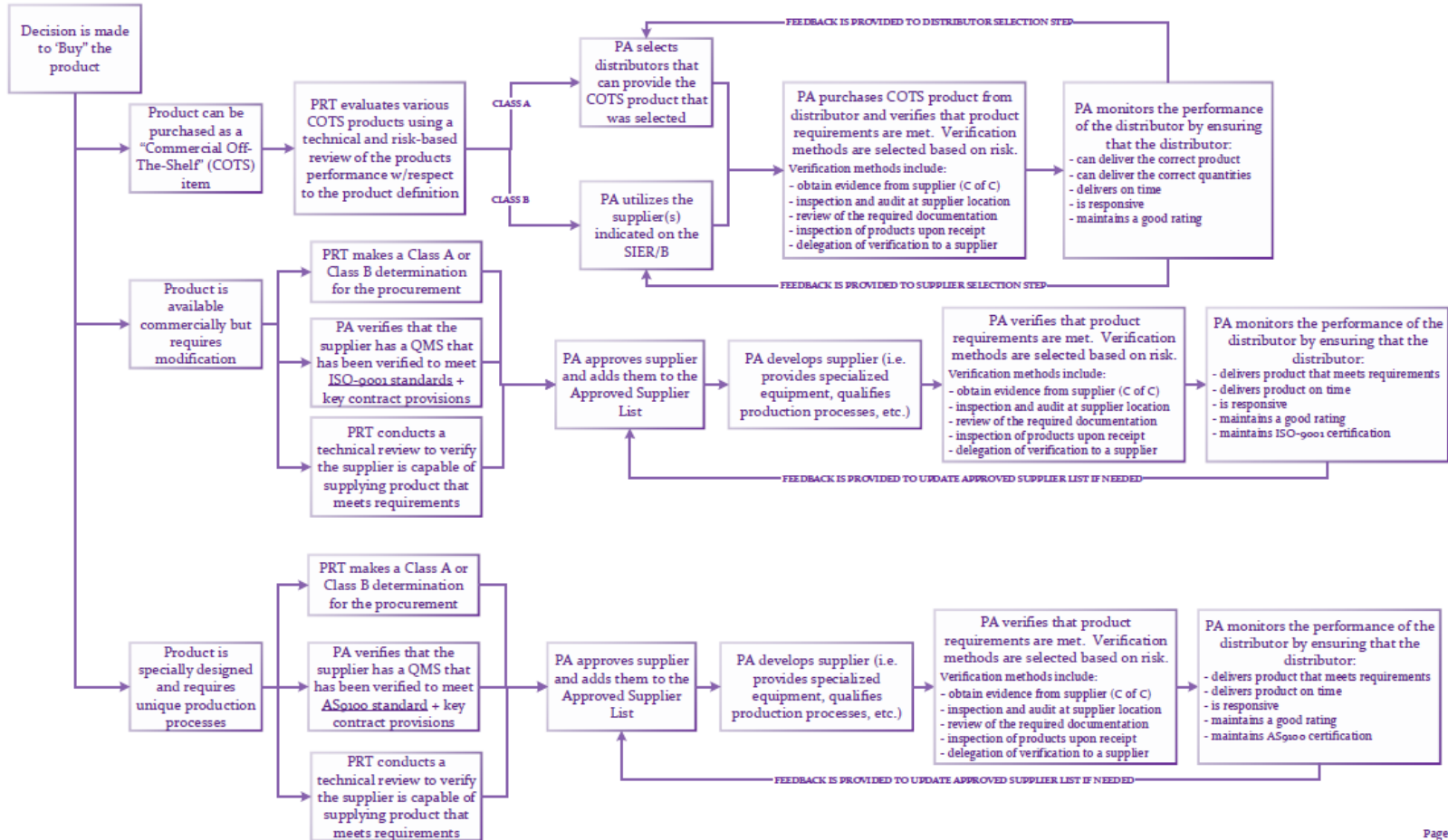


# Process Diagram – Input for R013 Development



## R013: Appendix A: Control of Suppliers - Flow Diagram

JUNE 22, 2021





- Appendix A
  - Evaluate – How do we Evaluate suppliers prior to selection? How does industry do this?
  - Select – How do we Select suppliers based on the evaluation to add to approved supplier list?
  - Monitor – How do we continuously Monitor supplier performance? How does it impact suppliers on the approved list? How does industry do this?
- Appendix B
  - Level 1 (COTS) – Modify selection based on technical risk assessment [out of scope for this team – Aerospace effort]
  - Level 2 (Commercial with slight modification) – ISO 9001 + **key contract provisions**
  - Level 3 (Specially Designed) – AS9100 + **key contract provisions**

While some sites may already be performing some of this, it is critical that we are consistent in our approach



## R013 Path Forward

- Generate new CCR for R013
- New Gate 1 Package
  - Identify Team Members
  - Develop timeline
  - Review interfaces: C001, T026, T027, T028, T029, T047, T048, and T088 for potential changes needed for consistency.



## Open Discussion

- Does your site procure Weapon Product?
- Who sets the quality requirements in the procurement contract?
- What is working well at your sites?





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# Backup Slides