WEAPON QUALITY MANAGEMENT SYSTEM (WQMS) BULLETIN

NNSA WEAPON QUALITY DIVISION (NA-121.3)

September 2020

NEW APPROACH TO THE NNSA *WEAPON QUALITY POLICY*

This Weapon Quality Management System (WQMS) Bulletin is to inform the Weapon Quality Assurance (WQA) community and other key stakeholders of upcoming changes to NNSA Policy (NAP)-401.1, *Weapon Quality Policy,* which the Weapon Quality Division (NA-121.3) restructured to align with the following vision.

To enhance customer satisfaction by meeting customer requirements, NNSA Defense Programs (DP) utilizes a "Process Approach," which is geared toward the quality of product, when developing, implementing, and improving the effectiveness of a Nuclear Security Enterprise (NSE) WQMS.

For NNSA DP to function effectively, it must determine and manage numerous integrated weapon activities. A weapon activity, or set of activities using resources, which is managed to enable the transformation of inputs into outputs, can be considered a process. Often, the output from one process directly forms the input to the next.

The application of a system of processes within NNSA DP, together with the identification of the interactions of these processes, as well as their management to produce the desired outcome, can be referred to as the "Process Approach."

An advantage of the Process Approach is the ongoing control that it provides over the linkage between the individual processes within the system of processes. This allows better control over the interactions between the processes that implement a WQMS.

Process Approach Benefits

When used within a WQMS, a Process Approach emphasizes the importance of:

1. Understanding and meeting requirements,
2. The need to consider processes in terms of added value,
3. Obtaining results of process performance and effectiveness, and
4. Continual improvement of processes based on objective measurement.
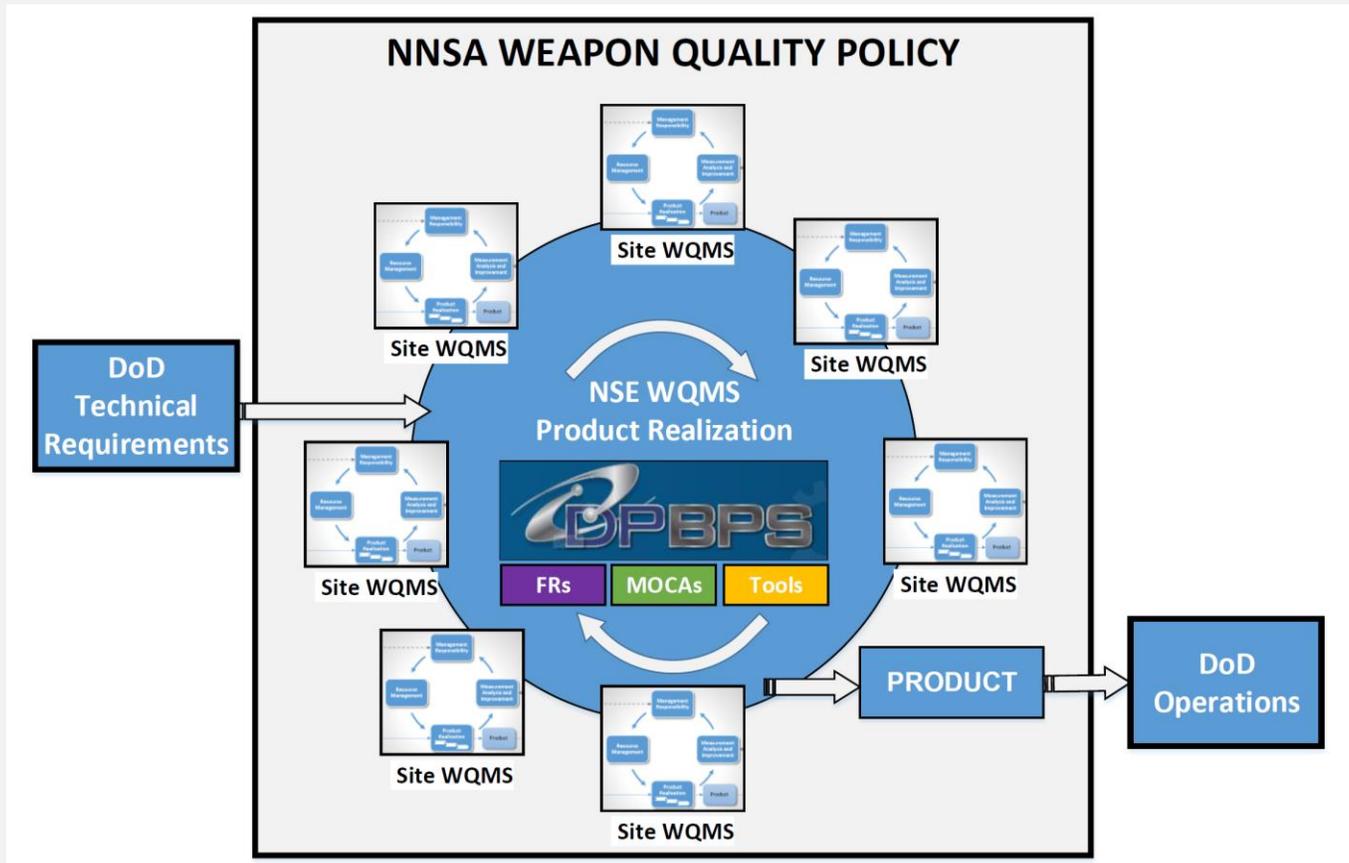
The new update to NAP-401.1A, Attachment 2, *Weapon Quality Requirements,* reflects a Process Approach to implement an effective WQMS across the NSE, which incorporates the WQMS that has been implemented at each site as shown in **Figure 1** (see next page).

As shown in **Figure 1**, NAP-401.1A also requires each NSE site that is involved in maintaining and enhancing the existing nuclear weapons stockpile to establish a WQMS. NAP-401.1A specifies the required elements of a WQMS that are to be in place at Design Agencies and Production Agencies.

Figure 1 also shows that NAP-401.1A includes quality requirements that are specific to executing Product Realization activities throughout all life-cycle phases of a nuclear weapon system. These requirements are implemented through the Defense Programs Business Process System (DPBPS), which directs DP mission work to be accomplished in a repeatable manner that consistently results in meeting customer requirements.

Figure 1. Process Approach for NSE WQMS

The initial drafts of NAP-401.1A contained six attachments which were covering various topics. NA-121.3 has worked to reduce this down to two attachments in support of the Process Approach as discussed in this bulletin.

NAP-401.1, Attachment 3: *Weapon Quality Process Requirements* are being moved from the *Weapon Quality Policy* and rewritten into DPBPS process document R004, *Weapon Quality Assurance Processes.*

NAP-401.1, Attachment 4: *Nuclear Enterprise Assurance* requirements are being moved from the *Weapon Quality Policy* and rewritten into a new NNSA Supplemental Directive as well as into a new DPBPS process document.

Two additional attachments covering Metrology and Suppliers were going to be included in NAP-401.1A, but following the process approach these two attachments will also be incorporated into the appropriate locations within DPBPS.

(NAP-401.1A serves as the parent document to each of the DPBPS documents identified above).