ATTACHMENT 3: WEAPON QUALITY PROCESS REQUIREMENTS

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1.0 INTRODUCTION TO WEAPON QUALITY PROCESS REQUIREMENTS

NAP 401.1, Attachment 3 defines common processes and activities for the federal and NNSA Contractor (both Design Agencies (DA) and Production Agencies (PA)) weapon quality organizations, employing a layered oversight approach involving Headquarters Weapon Quality Division (HQ WQD), Field/Production Offices (F/PO), NNSA Contractors and subcontractors.

Federal weapon quality personnel perform inherently governmental functions within their respective organizations by making value judgments in decision making for the Government. This Attachment provides direction on the federal interactions with NNSA Contractors and subcontractors to perform these functions. Federal weapon quality personnel perform oversight of Contractor weapon product design, production, verification, and surveillance activities and approval for delegation of NNSA processes to the Contractor.

The requirements found in Attachment 3 are necessary for driving nuclear weapon and weapon related activities to a high level of performance assurance commensurate with high expectations for nuclear weapon activities and products. These processes add to the NNSA confidence that the military and NNSA requirements are met and that the Nation's stockpile performs as expected for the life of the weapon program. In addition, these Weapon Quality Assurance processes establish independent oversight and verification inspection requirements leading to NNSA acceptance to ensure products meet and are traceable to product design and customer requirements.

1.1 PURPOSE

This NAP 401.1, Attachment 3, *Weapon Quality Process Requirements (WQPR)* specifies NNSA quality requirements and processes to be used by NNSA to ensure consistent and integrated implementation across NNSA sites.

1.2 RESPONSIBILITIES

NNSA product acceptance is based on a high level of assurance that the product meets all product definition and specifications. Assurance is obtained through a combination of verifications, evaluations, assessments, inspections, and collection and analysis of performance metrics.

1.2.1 HQ WQD shall

1.2.1.a Establish, maintain and interpret NAP 401.1, Attachment 3 by ensuring the requirements remain current, clear, correct, and complete;

1.2.1.b oversee implementation of this Attachment at each of the NNSA sites;

1.2.1.c be authorized to waive requirements in this Attachment;

1.2.1.d develop and issue Guidance and Clarification (G&C) messages to

provide supplemental policy and/or clarification of requirements in this Attachment;

1.2.1.e coordinate with HQ Weapon Program Managers for disposition and/or diversion of weapon components;

1.2.1.f oversee F/PO, contractor and subcontractor weapon and weapon-related activities in accordance with this Attachment; and

1.2.1.g manage weapon quality problems or issues with F/POs and Weapon Program Managers to include Production Waivers and other quality policy and technical business practice implementation decisions.

1.2.2 F/PO shall

1.2.2.a accept product on behalf of the Government through Contracting Officers or designated delegates. This responsibility cannot be delegated to NNSA Contractors;

1.2.2.b coordinate disposition and/or diversion of weapon components;

1.2.2.c oversee NNSA Contractor and subcontractor weapon and weapon-related activities in accordance with this Attachment; and

1.2.2.d ensure these oversight activities are integrated with the NNSA Contractor's Contractor Assurance System (CAS).

1.2.3 NNSA Contractors shall

1.2.3.a provide certification that the product meets design requirements (mark quality) prior to government acceptance of the product;

1.2.3.b conduct mission assignment activities to include but not limited to design and/or produce weapon and/or weapon related product for nuclear weapons in accordance with contract requirements;

1.2.3.c support investigation, resolution and closure of NSE wide corrective actions and requests in the implementation of this Attachment;

1.2.3.d oversee itself and subcontractor weapon and weapon-related activities in accordance with this Attachment; and

1.2.3.e implement NNSA delegated responsibilities.

2.0 OVERSIGHT PLANNING AND PERFORMANCE RESULTS

2.1 EARLY WEAPON QUALITY INVOLVEMENT

2.1.1 Purpose

This section defines and establishes the minimum requirements for promoting and establishing weapon quality activities as early as practical in the Product Realization Process (PRP) as defined in the Defense Programs Business Process System (DPBiz) documents R001, *Product Realization* and R006, *6.X Process*.

2.1.2 Policy

NNSA HQ, F/POs and NNSA Contractors shall ensure weapon quality personnel are involved and weapon quality activities performed as early as practical in design and production processes to provide weapon process and product quality assurance/oversight and to minimize product realization quality issues.

2.1.3 Responsibilities

2.1.3.a HQ WQD shall

i. provide weapon quality assurance support to weapon program Project Teams;

ii. coordinate with the Federal Program Manager during the formation of the Project Team on the assignment of a HQ WQD team member;

iii. participate with Weapon Programs in the development of planning documents to ensure quality requirements, practices, and principles are incorporated; and

iv. coordinate with F/POs to plan, conduct, support, and document weapon quality oversight activities at key production or design milestones.

2.1.3.b NNSA Federal Program Manager shall coordinate with NNSA HQ WQD for the assignment of a HQ weapon quality engineer to the Project Team.

2.1.3.c NNSA F/POs shall

i. conduct and document pre-production weapon quality oversight activities;

ii. coordinate with site NNSA Contractor to plan, conduct, support, and document weapon quality oversight activities at key

production or design milestones; and

iii. be involved with Product Realization Teams (PRTs) as necessary through coordination with contractor PRT interactions.

2.1.3.d NNSA Contractors (DAs and PAs) shall

i. assign at the formation of the Component Level PRTs, a Contractor weapon quality engineer to be a core PRT member for each component level PRT (who may be assigned to multiple PRTs) in which they have DA or PA responsibilities;

ii. apply weapon quality assurance principles and practices throughout the weapon life-cycle; and

iii. conduct and document weapon quality oversight activities at key production or design milestones.

2.1.4 Project Teams and Product Realization Teams (PRT)

2.1.4.a HQ WQD shall

i. participate on NNSA led Project Teams as core team members; and

ii. use the HQ WQD Project Team member to:

1) facilitate early and effective application of quality principles and requirements;

2) satisfy weapon quality requirements;

3) resolve quality issues; and

4) keep the HQ WQD Director apprised of Team meetings, quality issues, and items needing further management attention.

2.1.4.b NNSA Contractors shall

i. use the Contractor weapon quality engineer PRT team member(s) to:

1) facilitate early and effective application of quality principles and requirements;

2) satisfy weapon quality requirements for gate reviews;

3) resolve quality issues; and

4) keep their Quality Management apprised of quality issues and items needing further management attention.

ii. keep local NNSA F/PO Quality Management apprised of significant issues; and

iii. notify their F/PO Weapon Quality personnel of upcoming major programmatic meetings and PRP Gate Reviews.

2.1.5 Oversight

2.1.5.a NNSA HQ WQD, F/POs, and NNSA Contractors shall plan, conduct, and document pre-production weapon quality oversight activities to minimize quality issues downstream.

2.1.5.b NNSA shall include early involvement weapon quality oversight activities in Quality Assurance Activities Plans (QAAP).

2.1.6 Records

2.1.6.a NNSA QAAPs

2.1.6.b NNSA and contractor weapon quality assessments

2.1.6.c NNSA Weapon Program Quality Plans

2.1.6.d NNSA Project Team Charters

2.1.7 References

2.1.7.a NNSA Policy, NAP 401.1, *Weapon Quality Policy*, Sections 2.4, *Early and Continuous Application of Quality Principles* and 2.6, *Planning*.

2.1.7.b R001, *Product Realization*.

2.1.7.c R006, *6.X Process*.

2.1.7.d DOE STD-1025 (NNSA) or equivalent (contractor).

2.2 QUALITY ASSURANCE ACTIVITIES PLAN

2.2.1 Purpose

This section applies to NNSA HQ WQD and F/POs and defines the requirements and process for developing, documenting and maintaining a QAAP.

2.2.2 Policy

HQ WQD and F/POs shall ensure that weapon quality oversight activities are prioritized, planned, coordinated, effective, and documented in a QAAP.

2.2.3 Responsibilities

2.2.3.a HQ WQD shall

i. coordinate, develop, maintain and effectively utilize a HQ WQD QAAP;

ii. annually evaluate each F/POs initial QAAP;

iii. determine the F/PO QAAP's adequacy in meeting weapon quality assurance in regards to specific F/PO mission objectives;

iv. document the determination in a memorandum to the F/PO Manager and NA-12; and

v. periodically evaluate the effectiveness of F/POs utilization of their QAAP.

2.2.3.b F/POs shall coordinate, develop, maintain, and effectively utilize a QAAP.

2.2.4 QAAP Process Requirements

2.2.4.a HQ WQD shall coordinate initial assessment and oversight planning input with all F/POs and provide input by June 30th of each year.

i. The initial HQ planning input includes enterprise-wide or site-specific focus areas and known recurring assessments for the upcoming year.

ii. The focus areas are intended as early planning aids that are expected to be covered by either the NNSA Contractor's or F/PO assessment activities.

2.2.4.b F/POs plan and coordinate weapon quality oversight of NNSA Contractor activities for the next fiscal year and submit to HQ WQD a draft or the approved QAAP by September 1st and if necessary, the approved QAAP by September 15th of each year.

i. A risk-management process shall be used to develop the content of the QAAP.

ii. The F/PO shall ensure the schedule and scope of assessments in

their QAAP aligns with their Site Integrated Assessment Plan (SIAP) input.

2.2.4.c Based on a risk-management approach, HQ WQD shall use the information from the F/PO QAAPs to document a coordinated and approved HQ WQD QAAP by October 15th of each year.

i. The HQ WQD may identify additional areas that require special Quality Assurance Surveys (see Section 3.5 of this Attachment) and coordinate with the F/POs prior to conducting any Survey that involves the F/POs.

ii. HQ WQD shall ensure the schedule and scope of assessments in their QAAP aligns with their SIAP input.

2.2.4.d HQ WQD and F/POs shall document the implementation status and significant changes to the approved QAAP in Quality Reports.

2.2.4.e HQ WQD and F/POs use their QAAP to efficiently and effectively ensure weapon quality requirements and mission goals and objectives are achieved.

2.2.5 Quality Assurance Activities Plan Content

2.2.5.a The title page shall contain the following information:

i. HQ WQD or the F/PO title;

ii. the FY planning period, date issued and any revisions; and

iii. approval signature of HQ WQD Director or F/PO Manager.

2.2.5.b The content of the QAAPs shall be developed using an analysis of the previous year weapon quality accomplishments, issues, and nonconformances as well as upcoming activities. The QAAP shall address the following items, if applicable:

i. Continuous improvement initiatives.

ii. Early involvement weapon quality oversight activities.

iii. Quality Assurance Surveys.

1) F/POs describe plans for the number, types, and scopes of surveys planned of NNSA Contractors and their subcontractors.

2) F/PO planning shall be coordinated with the F/PO specific

CAS.

3) HQ WQD describes plans for Quality Assurance Surveys of the F/POs and plans for supporting NNSA Contractor assessments (see Section 3.5, *Weapon Quality Assurance Surveys*, of NAP 401.1, Attachment 3).

NOTE: To avoid redundancy with SIAP requirements, HQ WQD and F/POs may attach their weapon quality SIAP input (in the format required by the SIAP) to their approved QAAP to show the schedule of weapon quality assessments for the upcoming year.

iv. Product verification inspections.

1) Use projected production schedules to estimate the total quantity of product expected to be inspected by the NNSA.

2) The activities shall be described in a manner consistent with keeping the document unclassified.

v. NNSA Contractor-generated information.

1) Describe the type of NNSA Contractor information used to ensure performance.

2) Include information from such things as the CAS, quality-related metrics, corrective action systems, etc.

vi. HQ WQD or F/PO involvement in Program and Project Efforts.

1) Product Realization Efforts

a) Specify the product(s) on which the Product Realization Team is focused.

b) Provide a brief explanation of the scope of the planned involvement.

2) Engineering Evaluations provide a brief explanation of the scope of the planned involvement.

3) Quality Projects

a) Provide a brief description and goal of each of the projects.

b) Explain the scope of the planned involvement.

4) Provide a brief description of the involvement with various Program Activities.

5) Other Quality Activities describe initiatives not included in the other categories, such as Unsatisfactory Reports (URs) and Significant Finding Investigations (SFIs), as applicable.

vii. Resources.

1) HQ WQD and the F/POs shall describe changes in staffing and the qualification status of staff members.

2) HQ WQD and the F/POs shall provide a rough estimate of the resources necessary to perform QAAP activities, such as personnel, experience, time, or travel funds.

3) Where possible, F/POs should support other F/POs Quality Assurance Surveys and plan for and document those in the QAAP.

2.2.6 Records. QAAP

2.2.7 References

2.2.7.a NAP 401.1, *Weapon Quality Policy*, Attachment 2, Sections 2.3, *Organization* and 2.6, *Planning*.

2.2.7.b Business Operating Procedure (BOP)-10.003, *Site Integrated Assessment Plan (SIAP) Development, Updating, and Reporting.*

2.3 PERFORMANCE MEASURES AND QUALITY REPORTS

2.3.1 Purpose

This section establishes requirements for reporting weapon quality assurance performance.

2.3.2 Policy

HQ WQD and F/POs shall collect, analyze, and report weapon quality performance.

2.3.3 Responsibilities

2.3.3.a HQ WQD shall

i. use F/PO reported results and internally maintained measures to monitor Enterprise-related Weapon Quality performance;

ii. use monitoring results as input to survey planning and policy improvement initiatives;

iii. report (to senior NNSA Defense Program Management and F/PO Managers) the state of NNSA Weapon Quality Assurance; and

iv. coordinate support to propagate good weapon quality work practices or address negative trends or issues.

2.3.3.b F/PO shall

i. prepare and submit Quality Reports (2.3.4) to HQ WQD;

ii. respond to HQ WQD requests for additional information or explanatory details; and

iii. use the M&O input supporting Section 2.3.4 to monitor contractor weapon quality performance, develop the QAAP, and plan F/PO improvement initiatives.

2.3.4 Performance Measures and Quality Reports

F/POs collect and report performance measures to HQ WQD semiannually to include the following content (Exclude data that would result in a classified report):

2.3.4.a Escapes.

NOTE: Escapes are nonconformances related to design, manufacturing, acceptance, handling, etc. of a product that has been shipped impacting (or potentially impacting) form, fit and function. Nonconforming Material Reports (NMR) and Unsatisfactory Reports (UR) are common systems to identify/capture product escapes.

2.3.4.b Other site specific performance measures that demonstrate the health of weapon quality assurance implementation.

2.3.4.c All reported metrics shall include performance against pre-established goals and include the metric trend (over time).

2.3.4.d Supporting narrative discussion on M&O and F/PO actions to:

i. Address negative trends;

ii. Improve performance;

iii. Share lessons learned;

iv. Identify issues impacting (or being impacted by) other sites; and

v. Improve weapon quality implementation.

2.3.4.e In addition, include the following per NAP 401.1, Attachment 3:

i. 2.2.4. d, "HQ WQD and F/PO shall document the implementation status and significant changes to the approved QAAP."

ii. 3.2.5. d, "CAV inspection data shall be included."

iii. 4.1.4. g. v, "NMR-related metrics and status information."

2.3.4.f Year-end reports include a summary analysis of FY performance.

2.3.5 Records. Quality Reports

3.0 PRODUCT ASSURANCE AND SUPPORT

3.1 VERIFICATION INSPECTION

3.1.1 Purpose

This section describes the responsibilities, processes, methods, and sampling plans used to perform verification inspection upon completion of contractor certification of product in support of overall product acceptance.

3.1.2 Policy

Product verification inspection activities are formally planned, documented, and performed according to inspection criteria.

3.1.3 Responsibilities

3.1.3.a HQ WQD shall establish and maintain the policies and procedures for product verification inspections.

NOTE: HQ WQD also has the authority to perform verification inspections, acceptance, and acceptance withdrawal as needed.

3.1.3.b F/POs shall

i. identify items requiring NNSA and Contractor verification inspection on the Quality Instruction List (QIL);

ii. maintain the QIL unless delegated to the Contractor;

iii. develop and maintain NNSA Quality Assurance Inspection Procedure's (QAIPs) for each part type or family for verification

inspections by NNSA;

iv. perform verification inspections;

NOTE: F/POs may delegate authority for the Contractor to perform verification inspections per Section 3.4 Delegation of Authority.

v. determine whether submitted QIL product meets inspection criteria;

vi. ensure that personnel are authorized to inspect product, stamp product, and sign the Certificate of Inspection (COI);

vii. ensure that F/PO personnel performing product verification inspection meet the qualification requirements in DOE-STD-1025 Weapon Quality Assurance Qualification Standard; and

viii. for Development Joint Test Assemblies (DJTAs), at a minimum:

1) Verify that the development components of the DJTA meet product definition prior to shipping to a Nuclear Security Enterprise (NSE) or Ultimate User (UU) site; and

2) Perform a non-nuclear verification at the site assigned to perform final assembly of the DJTA and apply Tamper Evident Seal (TES) (Pantex and Laboratories) prior to shipping to the UU.

3.1.3.c Contractors shall

i. if delegated, perform verification inspections as outlined per this NAP;

ii. develop and maintain QAIPs per Appendix 3.1-B as delegated;

iii. submit weapons or weapon-related material for verification inspection as identified on the QIL;

iv. maintain a current list of personnel authorized to sign the Certificate of Inspection (COI) as representatives of the production agency;

v. provide quality evidence, specifications, acceptance equipment, and additional information requested by the F/PO in support of the verification inspection;

vi. respond with corrective actions as directed by the F/PO for

identified defects: and

vii. notify F/PO that product is ready for verification inspection at the vendor for those products that are identified on the QIL for NNSA verification inspections.

3.1.4 Verification Inspection Process Requirements

3.1.4.a To assist F/PO with QIL determination, Contractors shall coordinate with F/PO to establish a process for notification of new production items prior to the First Production Unit (FPU)

3.1.4.b F/PO identifies items for the QIL requiring verification inspection. This determination is based on risk, and includes, but is not limited to, such factors as:

i. Quality history - Is it a new item with no quality history? If previously-built item, what is the quality history? Any recent process changes?

ii. Complexity of the item or the technology to produce the item (e.g., digital integrated circuit versus a simple mechanical piece part).

iii. Consequences of failure of the item to the subsystem, major component, entire weapon, Joint Test Assemblies (JTAs) or Pentagon "S" requirement.

iv. Availability of the item for inspection prior to being built up into larger assemblies or subassemblies.

3.1.4.c Maintain QIL and QAIPs

i. F/PO or delegate maintains a QIL to document the items that shall be submitted for verification inspection (see Appendix 3.1-A).

1) QILs are also used as an index with the QAIPs effective issues.

2) QILs are updated as QAIPs are revised, added, or removed. The QIL is issued as updates occur or at least annually when no changes have occurred. Temporary changes to the QIL shall be dated and initialed.

ii. For NNSA verification inspections, F/PO shall provide a copy of the QIL and the NNSA QAIP cover sheet to the NNSA Contractor and make them available to HQ WQD, upon request.

iii. Prepare and maintain QAIPs (See Appendix 3.1-B).

3.1.4.d NNSA Verification Inspection at the Supplier

i. When the F/PO identifies items on the QIL that is manufactured by suppliers, the Contractor may request approval with justification, for verification inspection to be performed at the supplier location.

ii. Justification for "at location" supplier verification inspection requests may include one or more of the following criteria:

1) The product is environmentally sealed or assembled at the supplier, which precludes performing the required verification inspection at the NNSA Contractor;

2) The time for processing a specific item is critical, and significant time is saved by direct shipment from the supplier to the using NNSA Contractor;

3) Verification inspection at the supplier will save substantial shipping costs;

4) The cost of duplicating gages or test equipment required for inspection at the NNSA contractor is prohibitive; or

5) Supplier acceptance equipment is acceptable and no NNSA equipment is available.

3.1.4.e Verification Inspection Submittals

i. The COI is the official document used:

1) by Contractors to identify and certify product that the submitted material meets design requirements;

2) for Contractors to submit specified material to the NNSA; and

3) to indicate inspection results and disposition of submitted material.

ii. Contractors

1) Provide F/POs:

a) Names of Contractor personnel authorized to sign the COI and furnish updates as they occur.

b) Sufficient time to allow for normal processing, including travel, if necessary, before the required next assembly or ship date.

2) Submit items listed on the QIL.

3) Certify on a COI that the listed material meets the applicable specification and quality requirements of the contract (see Appendix 3.1-D).

a) For continuous sampling, use one COI during the calendar month for each QAIP or QAIP stage.

b) For lot sampling, use one COI for each lot submitted.

c) If a submittal is rejected, the F/PO closes out the COI, and the Contractor uses a new COI for the next submittal, upon F/PO acceptance of the CAR for the reject.

d) Ensure any changes to the COI are controlled and authorized.

4) Provide test equipment, quality evidence, and specifications required by the QAIP cover sheet when submitting material designated on the QIL.

5) Once product and associated quality evidence is submitted for QAIP it is in NNSA possession and shall not be accessed by Contractor or modified without NNSA approval.

iii. F/POs may combine material in a QAIP family (a group of similar material or products) and both new and reacceptance production for submittal and sampling purposes, provided:

1) The COI clearly associates product definition with submitted material; and

2) The material is produced from a single manufacturer.

3.1.4.f Performing the Verification Inspection

i. Select the applicable QAIP for submitted material based on "new production" or "reacceptance".

ii. Select a sampling plan per Appendix 3.1-C. Maintain a summary log per Appendix 3.1-E

iii. Ensure submitted material is not compromised during inspection.

iv. Examine quality evidence and inspect the product based on the QAIP-prescribed inspection requirements and the design definition.

NOTE: Failure to meet design definition requirements is cause for rejection unless covered by a Design Agency (DA) Specification Exception Release (SXR).

v. Perform inspection in a practical sequence if not specified in QAIP.

vi. Use the "as measured" inspection concept (per General Requirements 9900000) and assign a defect to inspection characteristics that do not conform to design specifications.

3.1.4.g Verification Inspection Equipment

i. Use DA or Production Agency (PA)-specified, -approved, -qualified, or -reviewed gages or test equipment where applicable.

ii. Use an open setup (no specified piece of equipment) when DA/PA-approved, qualified, or -reviewed gages or test equipment does not exist.

iii. Ensure that the measuring and test equipment is identified and calibrated consistent with applicable requirements of NAP 401.1, Section 3.10.

3.1.4.h Verification Inspection Criteria

i. Determine acceptability of submitted product based upon the following criteria:

1) Product meets all applicable requirements (QAIP, drawing, specification, and contract).

2) Product and test equipment is covered by an acceptable or conditional Qualification Evaluation Release (QER) as applicable.

3) Deviations from design requirements are covered by an approved SXR with a sound technical justification that shall be clear to verifiers.

ii. When using lot sampling, if a sampled unit is determined not to meet the inspection criteria, the entire submission is returned to

the Contractor for appropriate corrective action.

iii. When using lot sampling and 100% inspections are performed then only the affected unit shall be rejected and returned.

iv. Record the results of the submitted material in the NNSA portion of the COI, including any defects and incidental defects.

3.1.4. i Apply diamond stamp (section 3.3.4.c.i) upon acceptable verification inspection criteria and quality evidence.

NOTE: Dependent upon the stamping delegation and documented agreement at each site the diamond stamp may already be present on the components before the verification inspection.

3.1.4.j Disposition of Defective Material and Corrective Action

i. The F/PO or Contractor, as applicable

1) Originates a Quality Assurance Defect Report (QADR) (see Appendix 3.1-F) to report defects, including incidental defects, observed during verification inspection of submitted material.

NOTE: Defects are defined as a noted departure from drawing or specification on a product characteristic or inadequate quality evidence to verify that the requirements are met that affect form, fit, function, and traceability. Incidental Defects are defined as a defect that does not affect form, fit, or functions of the product submitted. This might include cosmetic items or paperwork errors.

a) F/PO may permit the Contractor to correct incidental and easily-remedied defects and allow the inspection to resume without rejection of the COI.

b) A CAR for incidental defects is required only when requested by the F/PO.

c) The incidental defect shall still be noted on the QADR.

2) May reject material if the Quality organization determines the number of incidental defects is excessive.

3) Forwards a QADR to the contractor to require a Corrective Action Response (CAR) that identifies the root cause and the appropriate corrective action(s).

4) Retain records of COIs and QADRs for any submitted material.

ii. Contractors

1) Receive QADR, suspend further submittals for that material and initiate the corrective action process.

2) Investigate defect to determine root cause and extent of the issue.

3) Initiate specific corrective action(s) and develop preventive corrective action(s).

4) Prepare and submit CAR to the F/PO.

5) Upon F/PO acceptance of the CAR, the material submittal(s) should resume.

6) Identify previously rejected and resubmitted material as a resubmittal in the Remarks section of the COI, specifying the item(s) that was rejected.

7) Ensure any changes made to the COI are authorized, controlled, and explained in the Remarks section.

8) Retain records of COIs and QADRs for any submitted material.

iii. The QADR is closed out after Contractor corrective action response(s) are reviewed, verified, and accepted by the F/PO.

iv. If a resubmitted item is not selected as a sample that item still requires inspection to ensure correction of the defects found during the initial verification inspection has been corrected and confirmation that any rework has not affected other characteristics.

NOTE: A defective item may indicate problems with Contractor inspection processes. It may be necessary to use a more conservative sampling plan until there is confidence that the problems have been resolved (See Appendix 3.1-C).

3.1.4.k Summary Log: The F/PO shall

i. maintain a summary log that records submittals for each QAIP configuration (Ref. Appendix 3.1-E); and

i. separate logs for QAIP material produced by different manufacturers.

3.1.5 Records

3.1.5.a F/POs

i. NNSA Quality Assurance Inspection Procedure (QAIP)

ii. Quality Instruction List (QIL)

iii. Certificate of Inspection (COI)

iv. Quality Assurance Defect Report (QADR)

v. Summary Log

3.1.5.b Contractors

i. Quality Assurance Inspection Procedure (QAIP)

ii. Quality Instruction List (QIL)

iii. Certificate of Inspection (COI)

iv. Quality Assurance Defect Report (QADR)

v. Corrective Action Response (CAR)

vi. Evidence of closure of Corrective Actions

3.1.6 References

3.1.6.a General Requirements 9900000.

3.1.7 Appendices

3.1.7.a Appendix 3.1-A: Instructions for Quality Instruction List (QIL)

3.1.7.b Appendix 3.1-B: Instructions for Quality Assurance Inspection Procedures

3.1.7.c Appendix 3.1-C: Instructions for Sampling Plans

3.1.7.d Appendix 3.1-D: Instructions for Certificate of Inspection (COI)

3.1.7.e Appendix 3.1-E: Instructions for Summary Log

3.1.7.f Appendix 3.1-F: Instructions for Quality Assurance Defect Reports

(QADRs)

3.1.7.g Appendix 3.1-G: F/PO/Contractor Prefix Designators

3.1.8 Forms

3.1.8.a Certificate of Inspection Form, Appendix 3.1-D

3.1.8.b Summary Log Form, Appendix 3.1-E

3.1.8.c Quality Assurance Defect Report Form, Appendix 3.1-F

APPENDIX 3.1-A

INSTRUCTIONS FOR QUALITY INSTRUCTION LIST

A Quality Instruction List (QIL) specifies the products required to be submitted for verification inspection and the index of effective QAIP issue of active QAIPs. The QIL is updated as QAIPs are revised, added, or removed. F/POs may make temporary changes to the QIL; these shall be dated and initialed or otherwise controlled to ensure there are no unauthorized changes.

The QIL is also made available to HQ WQD upon request.

The QIL shall include the following information:

- Part Number: The NNSA Part Number without suffix.
- Item Description: The major component number, part title, and/or other appropriate material identification.
- QAIP Identifier: The NNSA part number (without suffix) is the QAIP identifying number, except in the case of a General QAIP.
- QAIP Issue: The QAIP issue is identified by a letter designation.
- Stage QAIP Identifier: For Stage QAIPs a suffix number is added to the QAIP Identifier.
- General QAIP (Family QAIP): General QAIPs for similar products or special-test QAIPs are identified by an alphanumeric symbol (e.g., GEN212 or QUO212). An individual line item is used to enter each part number covered in a General QAIP.

APPENDIX 3.1-B

INSTRUCTIONS FOR QUALITY ASSURANCE INSPECTION PROCEDURES

F/POs and Contractors develop, revise, and maintain Quality Assurance Inspection Procedures (QAIPs).

QAIPs prescribe the minimum inspection requirements necessary to determine product acceptability and are developed using a Design Agency (DA)-specified, -reviewed, -approved, -configuration managed, and authorized product definition. Draft QAIPs are coordinated through the responsible DA when there is a potential degradation of product due to performance of the QAIP, as applicable.

QAIP-prescribed inspection characteristics usually require hands-on inspection of the product. The QAIP may also require observing the contractor product inspection and/or an examination of contractor-performed inspection data in lieu of the F/PO inspection.

QAIPs may be prepared for:

- A single part type or for a family of similar part types (General QAIPs), and
- Stage QAIPs used to inspect critical characteristics that cannot be inspected at the final configuration.

A QAIP may be written to address new production, reacceptance, or both. Unless conditions warrant a separate QAIP, reacceptance requirements should be included with new production requirements in a single QAIP.

Changes are made by reissuing the entire QAIP. The cover sheet issue letter is considered the QAIP issue and appears on each sheet. QAIPs typically consist of a cover sheet followed by inspection instructions.

Cover Sheet: The cover sheet lists the information necessary to identify the product configuration and inspection characteristics of the product, and includes special handling and/or safety requirements. The cover sheet is provided to the Contractor for guidance in submitting the product and supporting quality evidence, and includes the following:

1. QAIP number
2. Date of issue
3. Effective date
4. QAIP issue is identified by a letter designation. The first issue is Issue A. Each sheet of the QAIP should have the same issue letter.
5. List of item descriptions and part-identifying numbers. The item description is the major component number and/or a descriptive title.

6. List of material configuration that is to be inspected, using the Part Number (P/N) or other unique part identifier. Major Component (MC) numbers and/or other descriptive titles may also be included. Use suffixes only when the QAIP applies to a specific suffix part number. If it is a stage QAIP, provide sufficient information to identify the appropriate configuration.

7. List of quality evidence required to perform the inspections, for example, radiographs, DA-specified or DA-approved records, or certifications. Terminology should be specific to ensure the needed evidence is accurately described.

8. List of required acceptance equipment and associated procedures and/or software required to perform inspections. Do not include issue dates or revision number. Number the items in this list to use as a reference in the inspection section.

9. List of applicable specifications and drawings for the submitted product and contractor procedures for using testers and gauges, as needed, to perform the QAIP.

10. Indicate whether the QAIP provision applies to new production, reacceptance material, or both.

11. Identify the QAIP owner (F/PO or Contractor). The QAIP owner reviews original and revised QAIPs for adequacy and accuracy and certifies this review by signing the cover sheet.

12. The reason for change, if applicable. Describe the revision purpose and identify which item numbers were revised. If it requires a reassignment of inspection item numbers or an extensive revision to the QAIP, indicate the changes on the revised QAIP and record a general reason for the change.

13. Any special handling requirements

Inspection Instructions: QAIP inspection characteristics are numbered and grouped in the following categories:

1. Records examination,

2. Marking,

3. Surface condition and foreign material,

4. Assembly,

5. Functional,

6. Dimensional, and

7. Electrical.

Select inspection characteristics that ensure the component or assembly functions as intended. These are selected from DA-specified requirements for visual, dimensional, and/or physical properties. Inspection characteristics should (to the maximum extent possible) requires actual inspection of the product, be significant attributes, and be capable of being inspected nondestructively. The F/PO or Contractor may consult with the DA for assistance in determining significant attributes.

Write clear and concise inspection instructions with action verbs (e.g., inspect, observe, examine). Inspection instructions that apply to a subset of parts within a family should be correlated to specific drawing, specification, or part references.

Include DA-required records and/or certifications in the cover sheet section, "Required Quality Evidence" and in the "Record Examination" section of the QAIP body.

APPENDIX 3.1-C

INSTRUCTIONS FOR SAMPLING PLANS

Sampling Plans establish the basis and reflect the level of assurance for verification inspections. Sampling is performed to verify the original inspection measurements and the original inspection procedures are valid. Sampling requires only a moderate level of assurance (e.g., 80%) of identifying a moderate level of nonconformance (e.g., 20%) to ensure against generic inspection problems. A random sample shall be used. The appropriate sampling plan is selected for both lot and continuous production based on the practical formation of submitted material and the use of the most effective acceptance method.

Table A defines a sample rate for a moderate level of assurance and is used unless an excessive number of defects (impact to form, fit, or function) have been observed and/or other quality indicators warrant a higher sampling rate. Table B defines the higher sample rate and may also be used for new products or production processes.

Table A.

Sampling Rate for 80% Assurance of Detecting a 20% or Higher Nonconformance Rate

Submittal Size	Sample Size	Submittal Size	Sample Size
1-3	All	10-19	6
4-7	4	20-119	7
8-9	5	120 and higher	8

Table B.

Sampling Rate for 90% Assurance of Detecting a 10% or Higher Nonconformance Rate

Submittal Size	Sample Size	Submittal Size	Sample Size
1-8	All	30-38	16
9-13	9	39-48	17
14-15	10	49-59	18
16	11	60-79	19
17-18	12	80-129	20
19	13	130-279	21
20-26	14	280 and higher	22
27-29	15		

APPENDIX 3.1-D

INSTRUCTIONS FOR CERTIFICATE OF INSPECTION

Contractor Instructions for Completing Certificates of Inspection (COI):

1. Item Description: Enter Design Agency (DA) descriptive title or nomenclature of material.

2. Part Number: Enter the NNSA part number or other part-identifying number.

3. RA (Reacceptance): Complete if reprocessed (not reworked after rejection) material is returned from the field and submitted for reacceptance.

4. Product Definition: Record information to identify the DA Product Design Definition, by issue, which defines the material, including engineering authorizations (i.e. Specification Exception Release (SXR), Special Instructions Engineering Release (SIER), Advance Change Order (ACO)). If material has been reprocessed and reaccepted to specific DA requirements, identify the applicable reprocessing definition. Record the Quality Evaluation Report (QER) on First Production Units (FPUs) and continue to list all conditional QERs until the product is acceptable. Identify the subcontractor when the material has been purchased.

5. Remarks: Explain changes made to original information on the COI and any other information needed for clarity. Identify previously-rejected units being resubmitted for acceptance.

6. Manufacturer's Lot Number: If the material was manufactured and controlled as a lot, record the manufacturing lot number. Otherwise state Not Applicable (N/A).

7. Serial or Control Number: Record serial or control numbers of items. Use a COI continuation sheet if additional space is needed. The PA may refer to existing manufacturing material lists attached to the COI in lieu of part numbers. The alternate list should provide adequate space for recording all required information.

8. Part Number (P/N) Suffix: For new production a single COI normally will list only products with the same two-digit P/N suffix, which shall be recorded beside the first unit of that product. For material with mixed suffixes, the product definition and units shall be clearly associated, and the suffix shall be recorded in this block whenever it changes.

9. Qty/Init/Date: Record the quantity and initial and date after each separate group certified. At the end of all entries, total the quantity submitted. (This may be N/A if submitting one product per COI.)

10. Signature and Date: The authorized PA representative shall sign and date the COI.

F/PO Instructions for Completing COI:

11. COI Number: Enter the COI number composed of the following:

    a. Prefix: This prefix has five-characters: the first two indicate the F/PO; the next two indicate the Contractor; and the last is either a plant submittal (“P”) or a supplier (vendor) submittal (“V”) (see Appendix 3.1-G). F/PO/Contractor Prefix Designator: The F/PO and/or NNSA Contractor concerned with product manufacture (See Appendix 3.1 G of this Attachment).

    b. Sequence Number: Each F/PO shall use the same series of numbers (1 - 9999). Each group of numbers may be separated into blocks if inspection is being performed in several areas. In the example KC-KC-P-0001, the Kansas City F/PO received an in-plant submittal from the Kansas City contractor, and the submittal is the first in the Kansas City F/PO sequence.

12. QAIP: Enter the Quality Assurance Inspection Procedure (QAIP) number and issue. (This may be entered by either the F/PO or the contractor, as agreed.)

13. Disp (Disposition): Record an "A" to identify all units that are accepted. Record an "R" to identify the unit that is rejected. If the COI is to be closed with a single acceptable lot submission, each non sample unit disposition need not be identified.

14. N: Enter an "X" to indicate sample units.

15. Total Quantities: When the COI is closed, enter the total number of units submitted or resubmitted, sampled, accepted, and returned. The inspector enters the number of defects and/or incidental defects.

16. Signature and Date: The authorized representative signs and dates the COI when it is closed.

NOTE: Certificate of Inspection Form is included below for reference and example.

National Nuclear Security Administration
CERTIFICATE of INSPECTION

COI #: (11)

QAIP (12)

Item Description: (1)

NNSA Part Number: (2)

RA (3)

Product Definition: (4)

Remarks: (5)

Manufacturer's Lot Number: (6)

DISP (13)	N (14)	SERIAL or CONTROL No (7).	P/N SUF (8)	QTY. (9)	INIT. (9)	DATE (9)	DISP	N	SERIAL or CONTROL No.	P/N SUF	QTY.	INIT.	DATE

Total Quantities (15)

Submitted	Resubmitted	Accepted	Returned

Sampled	Defects	Incidental Defects

The listed material meets the applicable specifications and the quality requirements of the contract.

Authorized NNSA Representative (16) **Date**

Authorized Production Agency Representative (10) **Date**

CERTIFICATE of INSPECTION
(Continuation Sheet)

Item Description: (1)							COI #: (11)						
DISP (13)	N (14)	SERIAL or CONTROL No (7).	P/N SUF (8)	QTY. (9)	INIT. (9)	DATE (9)	DISP	N	SERIAL or CONTROL No.	P/N SUF	QTY.	INIT.	DATE

APPENDIX 3.1-E

INSTRUCTIONS FOR SUMMARY LOG

Summary logs record submittals for each QAIP configuration and include the following information linked to COI information in parentheses ( ):

1. QAIP used (12),
2. Identify 100% inspection or sampling plan requirement.
3. Date sampled,
4. COI number (11),
5. Total quantity of units in the current submittal (If this data makes the document classified, then identify only the COI number) (15),
6. Number of units resubmitted as applicable (15) ,
7. Number of units sampled from this submittal (15),
8. Number of observed defects and incidental defects (15) ,
9. Disposition of the Submittal ("A" if accepted or "R" if rejected) (15), and
10. Any remarks deemed necessary.

NOTE: Summary Log Form is included below for reference and example.

National Nuclear Security Administration

SUMMARY LOG

Sampling Plan:

QAIP Identification: (12)

Date Sampled	COI Number (11)	Submitted Quantity (15)	Number Sampled (15)	Resubmitted Quantity (15)	# Defects (15)	# Incidental Defects (15)	Sub. Disposition (15)	Remarks

APPENDIX 3.1-F

INSTRUCTIONS FOR QUALITY ASSURANCE DEFECT REPORTS

NOTE: If Quality Assurance Defect Report (QADR) activities have been delegated to the contractor, the following information shall be documented and submitted to the F/PO.

1. Item Identification: Record the item identification and NNSA part number or other part-identifying number as shown on the COI.

2. COI No.: Record the COI number that was assigned to the product submitted.

3. Defect Information and Defect Description: Use a separate block for each defect observed. Record the serial or control number, QAIP item, and complete defect description and initial the appropriate block. If the defect is immediately corrected, add a note to indicate the correction was made and verified. If a defect is noted on a unit that is not selected as a sample, record the serial number (S/N) and defect description and identify it as a "non-sample." That defect is not used in the criteria for lot acceptance or rejection nor should it be included in the number of defects observed; however, the defective unit shall be rejected and the contractor shall screen the lot for that characteristic.

4. Remarks: Enter any pertinent information.

NOTE: Quality Assurance Defect Report Form is included below for reference and example.

National Nuclear Security Administration

QUALITY ASSURANCE DEFECT REPORT

ITEM IDENTIFICATION:		**COI NO.**	
DEFECT DESCRIPTION:			
Serial Number:	QAIP Item:	# Defective Units	Inspector Initials:
DEFECT DESCRIPTION:			
Serial Number:	QAIP Item:	# Defective Units	Inspector Initials:
DEFECT DESCRIPTION:			
Serial Number:	QAIP Item:	# Defective Units	Inspector Initials:
DEFECT DESCRIPTION:			
Serial Number:	QAIP Item:	# Defective Units	Inspector Initials:
DEFECT DESCRIPTION:			
Serial Number:	QAIP Item:	# Defective Units	Inspector Initials:
DEFECT DESCRIPTION:			
Serial Number:	QAIP Item:	# Defective Units	Inspector Initials:
DEFECT DESCRIPTION:			
Serial Number:	QAIP Item:	# Defective Units	Inspector Initials:
DEFECT DESCRIPTION:			
Serial Number:	QAIP Item:	# Defective Units	Inspector Initials:
DEFECT DESCRIPTION:			
Serial Number:	QAIP Item:	# Defective Units	Inspector Initials:
DEFECT DESCRIPTION:			
Serial Number:	QAIP Item:	# Defective Units	Inspector Initials:
Corrective Action Response Due Date:			
REMARKS:			

APPENDIX 3.1-G

INSTRUCTIONS FOR F/PO/CONTRACTOR PREFIX DESIGNATORS

The following are the current F/PO and Contractor prefix designators:

F/POs	Plants
HQ - NA-121.3	PX - Pantex Plant
NP - NNSA Production Office	KC - National Security Complex
KC - Kansas City	LA - Los Alamos National Laboratory
SS - Sandia	LL - Lawrence Livermore National Laboratory
SV - Savannah River	OR - Y-12 Plant
LS - Livermore	SN - Sandia National Laboratories
LA - Los Alamos	SR - Savannah River Plant
NS - Nevada	NT - Nevada National Security Site

3.2 CONTRACTOR ACCEPTANCE VERIFICATION (CAV)

3.2.1 Purpose

This section describes the responsibilities, processes, methods, and sampling for performance of Contractor Acceptance Verification (CAV). The CAV serves as an additional NNSA Weapon Quality Assurance tool for verification of an effective Contractor Quality Assurance Program.

3.2.2 Policy

The CAV process is an NNSA inspection that is not delegated to the Contractor. The CAV process applies to items that are not inspected by NNSA verification inspections. The F/POs perform CAVs of randomly selected samples of product that has been accepted through the Contractor's Quality Assurance Program (i.e. completion of Contractor final inspection/acceptance for an item, subassembly or assembly).

3.2.3 Responsibilities

3.2.3.a HQ WQA

i. Establish and maintain the policies and procedures for CAVs.

ii. Ensure consistent implementation of this section across the NNSA sites.

3.2.3.b F/POs

i. Develop site specific process with Contractor to coordinate, process and control NNSA randomly selected CAV product for NNSA inspection.

ii. Identify, plan, schedule and perform CAVs as identified in the Quality Assurance Activities Plan (ref. Section 2.2). Unscheduled CAVs may also be performed.

iii. Coordinate with the Contractor to identify and address any special requirements associated with performing inspection on the CAV product (e.g. degradation issues, handling, humidity, electrical testing etc.).

iv. Perform CAV inspection. Notify contractor of any identified product nonconformance.

v. Notify Contractor when CAV product is to be returned to Contractor control.

vi. Document inspection results as specified by site in their CAV process.

vii. Require CAR for nonconformance identified during CAV inspections as determined by F/PO.

3.2.3.c Contractors

i. Develop site specific process with F/PO to coordinate, process and control NNSA randomly selected CAV product for NNSA inspection.

ii. Deliver CAV product to pre-determined location for NNSA control and inspection.

iii. Coordinate with the F/PO inspector to identify and address any special requirements associated with performing inspection on the CAV product (e.g. degradation issues, handling, humidity, electrical tests, etc.).

iv. Retrieve CAV product upon F/PO notification that CAV is complete.

v. For a nonconformance discovered during the CAV process, the Contractor shall control the item until disposition of the nonconformance is completed.

vi. The contractor shall investigate any nonconformance(s) to determine the extent of condition.

vii. Implement corrective action and provide corrective action responses to F/PO for CAV findings/defects identified and documented in CAV report as applicable.

3.2.4 CAV Inspection Process

3.2.4.a For the CAV Inspection Product Selection, the F/PO randomly selects item (including lot(s), serial number(s) as applicable) for NNSA inspection.

NOTE: Inspection is generally limited to a sample of the available parts except when the F/PO determines 100% inspection of available parts is warranted.

3.2.4.b F/PO notifies Contractor of item(s) selected for CAV inspection.

3.2.4.c Contractor delivers selected item(s) to F/PO control for inspection.

3.2.4.d F/PO inspector performs inspection of item(s) for conformance to Design Agency drawing requirements.

NOTE: Inspection may include records examination, marking and visual examination, dimensional and assembly inspection, and functional and electrical testing as determined by the F/PO inspector.

3.2.4.e Inspector notifies Contractor of any suspect/actual nonconformance identified.

3.2.4.f The Contractor shall control any nonconforming item(s) until disposition of the nonconformance is completed.

3.2.4.g Contractor shall implement corrective actions to address any identified nonconformance and determine the extent of nonconformance conditions.

3.2.4.h F/PO inspector notifies Contractor upon completion of inspection and returns control of item(s) back to Contractor.

3.2.5 Reporting

3.2.5.a F/PO inspectors shall document results of the CAV inspection in a CAV report. The QAS 4 reporting format (ref. Section 3.5) may be used for CAV reports.

3.2.5.b CAV reports shall include documentation of the selected inspection item(s), inspection activities performed, description of any nonconformance(s) identified (including the requirement not met) and corrective action responses required.

3.2.5.c Report distribution shall include the Contractor and posting to the DOE iPortal.

3.2.5.d CAV inspection data shall be included in F/PO semiannual Quality Reports (ref. Section 2.3).

3.2.6 Records

3.2.6.a F/PO: CAV Reports

3.2.6.b Contractors: Corrective action response(s)

3.3 PRODUCT STAMPING AND MARKING

3.3.1 Purpose

This section defines the responsibilities and requirements for NNSA stamping and

marking of weapon and weapon-related products and packaging. Product stamping and marking is to provide a visual indicator of a quality status and the intended use of weapon and weapon-related material(s).

3.3.2 Policy

All weapon and weapon-related material shall display the appropriate NNSA stamp and/or restricted use marking. Each NNSA F/PO shall determine the major assembly level (i.e. MC, SA or CF designations) of the product that shall receive the stamping. When shipping weapon and weapon-related material to another NNSA geographic location or to the Ultimate User (UU), the material and the package shall display the appropriate NNSA stamp and restricted use marking. The contractor applies all markings, such as the restricted use markings (Ref. Section 3.3.4.d. Table 2).

3.3.3 Responsibilities

3.3.3.a HQ WQD

i. Establish and maintain the policies and procedures for product and packaging stamping and marking.

ii. Oversee F/PO implementation of the requirements in this section.

iii. In collaboration with F/POs and Contractors review, concur, and authorize the use of the Circle T stamp for conditional acceptance of materials.

iv. Interface with NNSA HQ Program organizations regarding stamping and marking activities.

3.3.3.b F/POs

i. Apply the appropriate stamps in accordance with this section unless authority has been delegated to the Contractor (see Section 3.4, *Delegation of Authority* in this Attachment).

ii. Circle T and the UK stamp shall not be delegated.

iii. Ensure that federal personnel performing product stamping meet the qualification requirements in DOE-STD-1025, *Weapon Quality Assurance Qualification Standard*.

iv. For Contractor personnel delegated NNSA stamping authority, ensure qualification requirements are documented in the Contractor Delegation Implementation Plan (Section 3.4).

v. Coordinate with HQ WQD to obtain authorization for the use of

conditional accepted material with the Circle T Stamp.

3.3.3.c Contractors

i. Apply the appropriate stamps in accordance with this section and stamping authority received from F/PO.

ii. If stamping authority delegation is received, ensure that personnel performing product stamping meet the requirements of this section and implementation plan identified in Section 3.4, *Delegation of Authority* in this Attachment.

iii. Coordinate with the F/PO for conditional acceptance of material (i.e. Circle T stamp application).

iv. Shall apply the Restricted-Use markings.

3.3.4 Product Stamping and Marking Process Requirements

3.3.4.a F/POs and Contractors shall Obtain and Control Stamps

i. Procure supplies and stamps (per size allowances specified in Section 3.3.4.c Table 1).

ii. Destroy stamps when they are visibly worn or damaged.

iii. F/PO and Contractor are to document individuals authorized to utilize NNSA-stamps.

iv. Establish a control system (i.e. inventory system) to show stamp assignments and to safeguard the stamps against loss, theft, and use by unauthorized persons.

3.3.4.b General Stamping and Marking Application

i. Stamping and Marking shall be applied directly to product(s) and use appropriate-sized stamps compatible with space limitations of the product.

1) Place stamps adjacent to the part number (P/N), weapon nomenclature, major component (MC) number, or serial number (S/N), or lot number if no serial number as applicable.

2) If stamping is impractical because of a small size, or material incompatibility, or environmentally packaged place the stamp on a tag or label, after ensuring that the label has the same product information.

ii. For stamping and marking, ink shall meet requirements specified in drawing 9919103, "Identification by Ink and Transfer Marking" and in accordance with drawing 9919100, "Marking, General Methods" unless as specifically called out in the product design definition.

iii. Use contrasting ink color for product stamping and over-stamping.

NOTE: If travel is necessary for the sole purpose of stamping a product and package at a supplier, the responsible shipping F/PO may request that the receiving F/PO apply the required stamp upon receipt and obtain their agreement to apply the required stamp.

iv. Confirmation of the stamping shall be documented (email or memo).

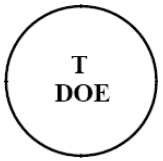
v. The shipping site is responsible for ensuring all stamping and markings are accurate prior to shipping.

1) Products that are to be environmentally protected such as vapor barrier, static sensitive, shall have a product identification label affixed on the exterior of the environmental packaging.

2) The identification label shall contain the same information as what is on the product such as nomenclature, part number, serial number or lot number if no serial number, date code etc. as applicable, and the appropriate stamp shall be applied to this identification label.

3.3.4.c Stamp Description and Usage (see Table 1 below)

Table 1: NNSA Stamps

Stamp	Purpose / Usage	Product Stamp	Package Stamp	Authorized User
Diamond  **SIZES:** **¼" x ¼"** **3/8"x3/8"** **½"x½"** **1"x5/8"** **1¼"x1"**	Diamond Stamp indicates material is Mark Quality. (1) Each NNSA F/PO shall determine the assembly level of the product(s) that shall have the Diamond Stamp applied. (2) All Mark Quality products shall be controlled and traceable. (3) Mark Quality products that need to be environmentally controlled shall also have the Diamond Stamp applied to the identification label on the environmental packaging (reference 3.3.4.b.iii.) above). (4) The Diamond Stamp is applied to the product at the pre-determined level, but not the packaging see IP stamp section of table. NOTE: A Diamond Stamp is not applied to testers or special tooling.	**Yes**	**No**	NNSA or as Delegated
Circle T  **SIZES:** **1½", 1"**	Circle T Stamp indicates conditional acceptance of material intended for War Reserve application. (1) This stamp is used when it is necessary to conditionally accept material to ship to next assembly only. (2) It is applied to both the material and packages being shipped to another NNSA site. (3) Conditionally accepted material shall not be shipped to an Ultimate User. (4) Use of the Circle T Stamp should only be considered as a last resort, and only when there is potential impact to the delivery schedule. (5) The Circle T Stamp shall not be delegated to the Contractor. (6) Prior to application of the Circle T Stamp, the HQ Weapon Quality Division Director shall provide approval based on evidence that: (a) A strong programmatic case is made that this is necessary, (b) There is high confidence that the material will ultimately be fully acceptable,	**Yes**	**Yes**	NNSA Only

Stamp	Purpose / Usage	Product Stamp	Package Stamp	Authorized User
	(c) The shipping F/PO has communicated the conditions for acceptance and the actions required to satisfy final acceptance requirements to the receiving F/PO, (d) There is concurrence from F/PO personnel for both the shipping and receiving sites, and (e) There are sufficient controls in place to ensure the Circle T material and its subsequent assemblies will not be shipped to the Ultimate User until the material meets all requirements. (f) If material was approved as conditionally accepted and needs to ship to another NNSA site for next assembly then the Circle T Stamp shall be applied near part number label on the outside of packaging. (g) Once the conditions have been satisfied for the product, the Circle T Stamp can be removed and the Diamond Stamp applied.			
Interproject (IP) IP DOE **SIZES: 2", 1"**	Interproject (IP) Stamp is applied to all packages containing Mark Quality Diamond Stamped material that are to be shipped to another NNSA site. (1) The IP Stamp shall not be applied to empty Type B containers.	**No**	**Yes**	NNSA or as Delegated

Stamp	Purpose / Usage	Product Stamp	Package Stamp	Authorized User
Star  **SIZES:** **2½", 1½"**	Star Stamp is applied to all weapon assemblies including TYPEs, Base and Military Spares, Limited Life Component (LLC) exchanges and JTAs for shipment to the UU/Department of Defense (DoD)	**Yes**	**Yes**	NNSA or as Delegated
Acceptance Required (AR)  **AR** **SIZES:** **1", ½", 3/8", ¼"**	Acceptance Required (AR) Stamp is applied to formerly mark quality material (may or may not have a diamond) that needs rework, reprocessing, or repair for reacceptance and reuse. The AR stamped material shall be controlled as Mark Quality material. (1) The AR Stamp shall be used to over-stamp the Diamond Stamp where present and near the part number where no diamond stamp is present on material that has had the acceptance withdrawn, but where there is intent to reaccept and reuse the material. Note: There may be some legacy materials that have a contractor stamp instead of a diamond. (2) This includes items returned from other NNSA sites or DoD. (3) The AR Stamp is applied to the material prior to any rework, reprocessing, or repair and removed prior to reacceptance. (4) Packaging containing AR stamped product shall also have the AR Stamp applied when items are shipped between NNSA facilities. (5) Whenever possible and practical, remove the "AR" over-stamp and any previously applied stamps prior to reaccepting the product. (6) In those cases where it is detrimental to the product to attempt removal, or when a residual image of the "AR" over-stamp and/or previously applied stamps remain after attempting removal, cancel stamps per Section 3.3.4.e below, *NNSA Stamp Cancellation*. (7) Once the product has been accepted, apply a new NNSA Diamond	**Yes**	**Yes**	NNSA or as Delegated

Stamp	Purpose / Usage	Product Stamp	Package Stamp	Authorized User
	Stamp adjacent to the cancelled stamps. NOTE: There may be product in the stockpile that has undergone rework, reprocessing, repair and reacceptance activities. In some cases, this process did not remove the previously applied stamps prior to reacceptance and the product was reaccepted with the residual stamp images left in place. (8) Material falling in this category shall be updated in accordance with these requirements when and if the material is identified for rework, reprocessing, repair and/or reacceptance.			
X 	The **X** is used to cancel, by over-stamping the acceptance stamp on the product or material when the material has been dispositioned or designated as scrap or excessed and is no longer useful or needed. If an NNSA Stamp is not present on the material/package then an "**X**" shall be marked on the material/package being scrapped near the part number.	Yes	Yes	NNSA or as Delegated
United Kingdom (UK) 	United Kingdom (UK) Stamp is for Mark Quality material that has been accepted for an Ultimate User shipment to the United Kingdom and is diamond stamped. (1) The Mark Quality product has a diamond stamp and the packaging has no stamp, Only the Certification Form shall display the diamond and over-stamped with the UK Stamp in contrasting ink. NOTE: US/UK CMD 01 (UK Trident Reentry System Joint US/UK Configuration Management Document) agreement is for the Mark Quality material for the UK. (2) UK Stamps shall not be delegated to the contractor. (3) The Diamond or UK Stamps shall not be applied to QP-100 Research, Design & Development (R,D&D) materials, certification documents or packaging for the UK. However the Certification	**No**	**No (Cert form only)**	NNSA Only

Stamp	Purpose / Usage	Product Stamp	Package Stamp	Authorized User
	Form is found within QP-100. NOTE: Diamond Stamped material diverted for UK RD&D does not need to have the Diamond Stamp removed. (4) UK materials returned for rework, repair or reprocessing shall follow the Acceptance Required (AR) process. (5) Reprocessed UK materials shall be controlled and segregated to prevent reaccepted material from entering the US WR stockpile.			
NNSA Stamp Cancellation and **Cancelling Residual Images**    	(1) NNSA stamp cancellation requires NNSA authorization (by delegation or on a case by case basis). (2) When NNSA stamp cancellation is required, such as needing repair, rework or reprocessed after initial acceptance and an AR was applied (e.g. quality status change) and a residual image is still present at re-inspection and prior to acceptance a legible line shall be struck through the stamp. (3) NNSA Stamps may also be physically removed when applicable and possible without damage to the product. (4) Any residual image remaining after stamp removal attempt shall be lined through using an approved method for marking the product.	**N/A**	**N/A**	NNSA or as Delegated

3.3.4.d Contractor Markings for Restricted-Use Material (see Table 2 below)

i. All restricted-use materials, except development and PPI material, upon Contractor Certification and/or NNSA verification that the material meets design definition shall have a Diamond Stamp applied at the ship level to another site.

ii. For those materials that are needed for a restricted use application and shipped to another NNSA site and are environmentally controlled and not feasible to open the environmental packaging to apply the restricted use marking on the material (Reference 3.3.4.b.iii above) then the P/N label on the environmental packaging shall be marked.

iii. The receiving site shall transfer the marking to the material once the environmental packaging is opened.

iv. When Parent Unit Parts (PUP) are selected for restricted use application, the respective restricted use markings shall be applied.

NOTE: PUP is a part that is removed by a Disassemble and Inspection process of Field Returned Units.

3.3.4.e Restricted-Use Material may be considered for reuse and the material shall be controlled in a Mark Quality manner.

i. Only Restricted-Use Material that maybe considered for reuse is Test Bed, JTA and EUO restricted-use material.

ii. The material cannot have been degraded in the previous restricted-use application.

iii. There shall be a justification from the DA with documentation to reuse the materials.

iv. The justification shall be specified in a Special Instruction Engineering Release (SIER) and reacceptance criteria shall be specified in a Reprocessing Specification or SIER.

Table 2: Restricted Use Marking

Restricted-Use Marking	Purpose / Usage	Marking/ Package Stamp	Authorized User
Joint Test Assembly **JTA**	Joint Test Assembly (JTA): Material that is Mark Quality and has a war reserve part number that is diverted for JTA restricted-use shall be specifically marked JTA. (1) All Packages containing this Mark Quality material shall display the "JTA" restricted-use designation near the part number and shall have a legible "IP" Stamp applied to the exterior of the shipping container when shipped between NNSA sites. (2) JTA materials have specific JTA part numbers. No additional markings are required. (3) The full up JTA shall display the JTA restricted-use marking and shall display a Star Stamp going to the Ultimate User.	"**IP**" Stamp applied to the exterior of the shipping container when shipped between NNSA sites	M&O
Development Joint Test Assembly **DJTA**	Development Joint Test Assembly (DJTA): DJTAs contain material that is Development and are not fully qualified. (1) The Development materials have existing restricted-use marking requirements (ref. TBP-402 and RMI Tool T039 has requirements for the "D" designation within the part number). a. If development material is to be selected and utilized for a DJTA, the DJTA restricted-use marking shall be applied on the material near the part number. b. Product definition for development material for use in DJTA shall be released through a Development Engineering Release (DER), Advanced Engineering Release (AER), or Complete Engineering Release (CER) and records of the product definition for the DJTA components maintained. c. Packaging containing Development Material(s) for DJTAs that are shipped between NNSA sites shall display the restricted-use DJTA marking near the part number on the exterior of the shipping container and shall not have any quality stamp on the exterior of the shipping container. d. Packages containing development material for other than DJTA needed at	**"D" with the part number** DJTA marking near the part number	M&O

Restricted-Use Marking	Purpose / Usage	Marking/ Package Stamp	Authorized User
	another NNSA site shall display Contractor marking DEV near the part number and on the exterior of the shipping container. No NNSA F/PO Quality Stamp (e.g. EUO, IP) is required only a "DEV" Contractor marking. (2) JTA materials destined for DJTA or JTA use that are fully qualified, mark quality, and are identified by a JTA unique part number require no additional restricted-use markings. a. Packages containing this mark quality material shall have the "DJTA" or "JTA" restricted-use marking near the part number and shall have a legible "IP" Stamp applied to the exterior of the shipping container when shipped between NNSA sites. b. War Reserve (WR) Mark Quality components diverted/selected for DJTA or JTA use shall be designated for this Restricted-Use with "DJTA" or "JTA" marking near the part number. (3) The full up DJTA shall display the DJTA restricted-use marking and shall not display a Star Stamp going to the UU. (4) The restricted-use marking application may be devised by the individual contractor.		
Process Prove-In **PPI**	Process Prove-in Material (PPI): Process Prove-In (PPI) parts are not fully qualified. (1) The PPI materials have existing restricted-use marking requirements (ref. TBP-201 requirements for "PPI" designation near part number). (2) If this material is to be selected and utilized for a DJTA, the restricted-use DJTA marking shall be applied near the PPI marking to show intended use. (3) Packaging containing PPI Material(s) for DJTAs that are shipped between NNSA sites shall display the restricted-use DJTA marking near the part number and PPI marking on the exterior of the shipping container and shall not have any quality stamp on the exterior of the shipping container.	**PPI on product** DJTA marking near the part number	M&O

Restricted-Use Marking	Purpose / Usage	Marking/ Package Stamp	Authorized User
Test Bed Material **TBO**	Test Bed Material: Test Bed Material is Mark Quality WR material diverted/selected for Test Bed evaluations. (1) Test Bed Material shall have Test Bed Only (or TBO where space is limited) marked on the product(s) near the part number. (2) Packages containing this material shall display the "Test Bed Only" (or "TBO") restricted-use designation near the part number and shall have a legible "IP" Stamp applied to the exterior of the shipping container.	**Test Bed Only Or TBO** "**IP**" Stamp applied to the exterior of the shipping container.	M&O
Training Material **TUO**	Training Material: Mark Quality WR material diverted for training purposes. (1) Training Material shall have Training Use Only (or TUO where space is limited) marked on the product(s) near the part number and the part number suffix lined through. (2) Packages containing this material that are shipped to another NNSA site shall display the restricted-use designation Training Use Only near the part number and shall have a legible "IP" Stamp applied to the exterior of the shipping container. (3) A Trainer with a unique part number (not a WR part number) needs no further restricted-use designation and product definition specifies the necessary marking designations. (4) A trainer component or full up trainer shipped to the UU/DoD shall display a Star stamp on the package.	"**IP**" Stamp applied to the exterior of the shipping container.	M&O
Evaluation Use Only **EUO**	Evaluation Use Only (EUO): Material that is Mark Quality WR weapon and weapon-related material that is selected or diverted for engineering evaluation purposes such as surveillance cycles, shelf life study, or future LEP surveillance activities. (1) Evaluation Use Only (or EUO where space is limited) shall be marked on the product(s) near the part number. (2) Packages containing this material that are shipped to another NNSA site shall display the restricted-use designation Evaluation Use Only (EUO) near the part	"**IP**" Stamp applied to the exterior of the shipping container.	M&O

Restricted-Use Marking	Purpose / Usage	Marking/ Package Stamp	Authorized User
	number		
Development DEV	Development Material: Follow the requirements of new products for development part numbering as outlined in the RMI T039, Product Definition Numbering and Control System. However for Mark Quality materials diverted for development activities for life extension programs or other development activities shall have DEV marking applied as an extension of the existing part number with the suffix lined through. Development materials shipped to another NNSA site shall also have DEV marked near the part number on the exterior of the package.	**DEV**	M&O

3.3.5 Records

3.3.5.a List of personnel authorized to use stamps

3.3.5.b UK Certification Form

3.3.5.c Stamping Assignment Inventory

3.3.5.d Program Management Diversion Authorizations

3.3.6 References

3.3.6.a Supplemental Directive NA SD M 452.3-1, *Defense Programs Business Requirements and Process Manual*

3.3.6.b General Specifications 9919100, 9919103

3.3.6.c QP-100, *Research, Design & Development (R,D&D)*

3.4 DELEGATION OF AUTHORITY

3.4.1 Purpose

This section provides the approved method for delegation of NNSA authority to contractors for NNSA stamping and inspections.

3.4.2 Policy

3.4.2.a NNSA Contracting Officers are responsible for accepting weapons and weapon-related material on behalf of the Government. The CO may delegate this responsibility to an NNSA official through a formal Letter of Delegation. The CO shall ensure that the official has the appropriate training and experience to perform the delegated activities. This responsibility for accepting weapon and weapon-related material cannot be delegated to contractors.

3.4.2.b While final acceptance authority cannot be delegated to contractors, the CO or delegated NNSA official may delegate to the contractor activities (stamping and verification inspections) that support product acceptance. Contractors shall provide assurance that delegated activities are carried out correctly and according to all applicable requirements. This assurance is verified through NNSA verifications and assessments of Contractor products and processes. The delegation of NNSA authority is accomplished through a Letter of Delegation from the CO or delegated NNSA official to the contactor with concurrence from NNSA HQ WQD.

3.4.2.c Letters of Delegation shall specify what authority is being delegated, what products are being delegated, to whom the delegation applies, listing of processes to be used by the Contractor, and the time frame the delegation shall be in effect. Letters of Delegation may be rescinded by the issuer at any time.

3.4.3 Responsibilities

3.4.3.a NNSA Contracting Officer or delegated NNSA Official shall

i. accept weapons and weapon-related material on behalf of the NNSA; and

ii. approve Letters of Delegation.

3.4.3.b HQ WQD shall

i. oversee F/POs implementation of this process;

ii. comment and concur on F/POs recommendation to CO or delegated NNSA official on delegation of NNSA authority to contractors for NNSA stamping and/or inspections; and

iii. participate on assessments of contractor processes for delegated activities leading to product acceptance.

3.4.3.c F/PO shall

i. determine verification inspection and stamping activities to be delegated and request that a contractor Delegation Plan is developed and submitted for those activities;

ii. review and approve contractor Delegation Plan for interim delegation;

iii. prepare or update the NNSA Delegation Verification Plan;

iv. execute this Plan to determine that the contractor's performance is meeting delegation activities during interim period;

v. recommend approval to the CO or delegated NNSA official for delegation of NNSA authority, only if concurred with by HQ WQD; and

vi. determine with HQ WQD input what QAS scope should be needed to make the final decision to re-authorize, suspend, or revoke delegation authority for previously delegated authority by the F/PO. For re-authorizations

1) conduct assessment, if needed; and

2) if re-authorization is concurred with by F/PO and HQ WQD, recommend approval to the CO or delegated NNSA official for delegation of NNSA authority.

NOTE: NA-121.3 concurrence happens when the QAS 2 Diamond and Star Stamping Delegation (SD) survey report of the contractor is complete and approved and any issues from the NA-121.3 team member are resolved. The final QAS 2 SD report identifies the NA-121.3 survey team member and provides a statement of his/her concurrence. For re-authorization where a QAS 2 SD is not applicable, HQ WQD concurrence is sent to F/PO through a memo.

3.4.3.d NNSA Contractors shall

i. prepare a contractor Delegation Plan and this implement Plan once approved by the F/PO;

ii. support periodic assessments of the delegated tasks and respond promptly to requests for information or corrective action; and

iii. maintain Delegation Plan with updated contractor procedures.

3.4.4 Delegation Process Requirements

3.4.4.a Contractor Delegation Plan includes:

i. The scope of authority, responsibilities, and activities delegated;

ii. The person (or position) with authority to ensure the activities shall be performed appropriately;

iii. Identification of organizations participating in the inspection and stamping processes who are independent of manufacturing;

iv. The contractor procedures necessary to ensure the delegated activities shall be performed in accordance with all applicable requirements in this attachment;

v. The schedule for implementation of these contractor procedures;

vi. Qualification of personnel performing delegated activities; and

vii. The records that result from the tasks.

3.4.4.b NNSA Delegation Verification Plan includes:

i. A review of the contractor implementing procedures;

ii. Performance of contractor during implementation of the delegated responsibility for the interim delegation period (interim period can be waived if reauthorized); and

iii. A QAS 2 SD of the NNSA contractor delegated processes. HQ WQD shall be invited to participate.

3.4.4.c Interim Delegation

i. The responsible contractor notifies the F/PO when they are prepared to begin the delegated tasks.

ii. The CO or delegated NNSA official issues a letter to the contractor that provides interim authority to begin performing the delegated tasks according to the contractor Delegation Plan.

iii. The F/PO and, as applicable, HQ WQD perform the verification activities identified in the NNSA Delegation Verification Plan.

iv. Significant findings or deficiencies identified during the verification and/or assessment shall be closed out before final contractor delegation is authorized.

3.4.4.d Delegation

i. Upon successful completion of the NNSA Delegation Verification Plan and at the recommendation of the F/PO and concurrence from HQ WQD, the CO or delegated NNSA official issues a Letter of Delegation to the responsible contractor.

ii. The letter specifically defines the scope and duration (up to two years) of the delegation.

iii. When re-authorization is required:

1) Contractor updates the delegation plan;

2) NNSA conduct assessments, as necessary (the F/PO shall determine with HQ WQD input what QAS scope should be needed to make final decision to re-authorize, suspend, or revoke delegation authority); and

3) F/PO, with concurrence from HQ WQD, provides the re-authorization recommendation to the CO or delegated

NNSA official.

3.4.4.e F/PO Delegation Oversight (post authorization to delegation)

i. F/PO Verifies the effectiveness of the responsible contractor delegated activities by performing periodic verification inspections and assessments.

ii. F/PO validates the compliance of the delegated stamping authority through assessments, either annually or every other year, depending on risk, quality history, results from previous validation inspections and assessments, and any other factors that the F/PO deems relevant.

iii. F/PO may recommend to the CO or delegated NNSA official to suspend or revoke delegation of NNSA authority at any other time if there is evidence the contractor is not fulfilling the agreed to responsibilities.

3.4.5 Records

3.4.5.a F/PO

i. Delegation Verification Plan

ii. Letters of Delegation

iii. Letters of re-authorization, suspension, or revocation

3.4.5.b Contractors: Delegation Plan

3.5 WEAPON QUALITY ASSURANCE SURVEYS

3.5.1 Purpose

This section establishes the NNSA Weapon Quality Assurance Survey (QAS) and Management Assessments processes and reporting requirements.

3.5.2 Policy

QASs and Management Assessments provide assurance of compliance, effectiveness, adequacy, and improvement of the HQ, F/POs and NNSA Contractor weapon quality assurance programs and lifecycle processes. The objectives of surveys and assessments are to: (1) assess HQ, F/POs, NNSA Contractors and subcontractors of quality assurance program performance throughout the product lifecycle; (2) effect improvements where needed; and (3) obtain quality evidence upon which to base government acceptance of weapons and weapon-related material and processes.

NOTE: Supplemental Directive NA SD M 452.3-1, *Defense Programs Business Requirements and Processes Manual*, Chapter 13.2, describes assessments performed by the Primary Standards Laboratory (PSL) on behalf of the NNSA to ensure the adequacy of NNSA Contractor standards and calibration programs.

3.5.3 Responsibilities

3.5.3.a HQ WQD shall

i. Maintain the policy and provide direction for QAS and Management Assessment processes.

ii. Coordinate survey plans and resources, as needed.

iii. Direct the planning for and lead (unless delegated by HQ WQD) QAS 1s and some QAS 2s.

iv. Participate or support in F/PO QASs and NNSA Contractor Supplier Surveys, as needed.

v. Analyze survey and Management Assessment results to identify NSE cross-cutting issues for process improvement, corrective action and/or additional oversight.

vi. Identify specific issues and priorities for future survey focus and document these in the HQ WQD QAAP.

vii. Conduct an annual Weapon Quality Management System (WQMS) Management Assessment.

3.5.3.b F/PO shall

i. Plan, perform and lead

1) QAS 2, 3, and 4s of NNSA Contractors;

2) Supplier Surveys; and

3) Management Assessments.

ii. As agreed to with HQ WQD, provide a qualified auditor to participate on each HQ WQD led QAS 1 conducted at another F/PO.

iii. Support QAS 2s led by HQ WQD, as agreed to with HQ WQD.

iv. Support QAS 2 and 3s led by other F/POs, as agreed to with HQ WQD.

v. Track and trend site-specific survey and Management Assessment results and corrective action responses.

vi. Coordinate and cooperate with HQ WQD led surveys of their F/PO.

vii. Identify specific issues and priorities for future survey focus and document these in the QAAP.

viii. Conduct an annual WQMS Management Assessment.

3.5.3.c NNSA Contractors shall

i. Participate on QAS 1s as agreed to with HQ WQD and F/PO.

ii. Cooperate with all QASs.

iii. Provide documents, data, corrective action responses and evidence of corrective action completion in response to HQ WQD and F/PO requests.

iv. Analyze survey and Management Assessment results to identify issues for process improvement, corrective action and/or additional oversight.

v. Identify specific issues and priorities for future NNSA Contractor assessment focus and document these in planning documents.

vi. Plan and perform Management Assessments.

vii. Conduct an annual WQMS Management Assessment.

3.5.4 Weapon Quality Assurance Survey Process Requirements

3.5.4.a Determine the survey schedule per NAP-24, Attachment 3, Section 2.2, Quality Assurance Activities Plan.

3.5.4.b Survey planning process requirements include

i. Scope (see NAP 401.1, Attachment 3, Appendix 3.5-A)

1) QASs assess compliance and performance of the WQMS.

a) QASs cover relevant contractual weapon quality requirements and implementing policies, programs, procedures, and/or processes, as well as product quality.

b) The scope may be defined as programs, systems, process, or product, or any combination, depending on the purpose and type of survey.

2) Scope shall include the effectiveness of relevant corrective actions from similar scoped past weapon quality surveys.

ii. Team

1) The team leader determines the size and composition of the team based on the scope of the survey.

2) Team members shall have the appropriate education, experience, authority, and clearance levels and shall not be directly responsible for the work being evaluated.

3) The team leader shall be qualified according to DOE-STD-1025, *Weapon Quality Assurance Area Qualification Standard*.

NOTE: Team members should be qualified according to DOE-STD-1025 or equivalent.

iii. The team leader is responsible for team member assignments, including:

1) The specific areas of survey focus, based on skills and experience;

2) Defining the report development process and assigning team member responsibilities for the report.

iv. Survey Plan for QAS 1 and 2s

1) Plans shall describe

a) the scope and purpose of the survey;

b) the criteria to be evaluated;

c) a description of the methods to be used;

d) the names of the team members; and

e) the survey dates.

2) Specific dates should be negotiated in advance to ensure there are operations to be observed.

3) HQ WQD shall be invited to participate on all Diamond and Star stamping delegation surveys.

NOTE: It is NA-121.3s intent to participate on Diamond and Star stamping delegation surveys. The NA-121.3 Director assigns a staff member who is DOE STD-1025 qualified, to participate as a team member on the Field Office led Diamond and Star stamping delegation surveys, however, if travel funding is not available to participate in person, then NA-121.3 shall participate from our office as a desktop reviewer.

v. Notification

1) The team leader drafts the survey notifications.

2) The notifications should request relevant documents and briefings, logistical and administrative support, and site access, etc. as determined by the team lead.

3) Notification approval and transmittal requirements are as follows:

a) QAS 1 notifications are approved and transmitted by HQ WQD, or designee, 30 days in advance to NA-12, the F/PO Manager (FOM), survey team members and to the NNSA Contractor via the FOM.

b) QAS 2 notification of F/PO led QAS 2s of the NNSA Contractor shall be transmitted in accordance with F/PO processes.

c) QAS 2 notification of HQ WQD led QAS 2s, shall be sent to the NNSA Contractor via the FOM not less than 30 days in advance.

d) QAS 3s, the team leader has the discretion to provide sufficient notification to ensure the availability of key NNSA Contractor staff, as necessary.

e) QAS 3s may also be performed unannounced.

f) QAS 4s are often unannounced and the scheduling shall be flexible since these surveys often coincide with production operations or inspection.

g) For Supplier Surveys performed by NNSA, notifications are coordinated by F/POs through their

NNSA Contractors and shall include notifying HQ WQD.

vi. Logistics

For HQ WQD led surveys, the F/PO is responsible for coordinating the logistics necessary to meet team needs, such as arranging for site access, and providing appropriate workspace and computer support, as well as access to a Derivative Classifier, if necessary.

vii. Read-ahead Materials

The surveyed organization shall respond in a timely manner to reasonable requests for read-ahead materials.

3.5.4.c Performing the survey

i. Opening Meeting

1) A graded approach shall be taken for holding the opening meeting. An opening meeting may range from a formal presentation down to an informal conversation with individuals being assessed.

NOTE: Supervisors should generally be made aware of assessments in areas under their authority.

2) The team shall provide time for introductions and for clarifying survey objectives.

ii. Collecting Evidence

The team shall schedule times, as needed, to conduct interviews, observe work, and request additional documentation and data to review.

1) If the team cannot cover the scope during the time allotted, the final report should indicate which areas of the survey plan were not observed.

2) A follow-up visit may need to be scheduled to address critical scope that was not reviewed.

iii. Classified Material

Use of classified material is sometimes essential to the survey and team members shall understand and follow all local

processes and requirements.

iv. Team Coordination

The team should collaborate during the survey to review progress, identify cross-cutting concerns, and plan the integrated activities.

v. Briefings

The team, or team leader, should brief appropriate representatives of the surveyed organization on the progress and status of the survey.

1) This is the time to identify additional data needs, and review survey progress, issues and factual accuracy validation.

2) These also provide the surveyed organization an opportunity to identify additional interviewees or other evidence that may address open issues.

vi. Issues Outside of Scope

During a survey, the team may identify issues that are outside the authority of the surveyed organization to resolve. These may be potential findings against other organizations, issues that impact the performance of the surveyed organization, or issues more appropriately resolved at a higher level (e.g., potentially conflicting NNSA requirements). In these cases, the team leader shall:

1) Ensure the issue is documented as a remark; and

2) Notify HQ WQD and, if necessary, the appropriate F/PO(s).

3.5.4.d Survey close-out and reports

i. Close-out Meeting

1) On the last day of the survey, the team reviews the survey results and conclusions with appropriate representatives of the surveyed organization.

NOTE: Team members should strive for consensus on survey conclusions; however, the team leader has final decision-making authority.

2) Barring last-minute identification of key information, the results presented should represent the final conclusions of the team.

NOTE: Regular communication throughout the survey should preclude any surprises at this point.

3) The team provides enough detail to enable the surveyed organization to begin corrective actions as soon as possible.

4) A copy of the close-out presentation, as applicable, shall be left with the surveyed organization so that identified issues can begin being addressed.

5) The team leader determines if a factual accuracy review is needed, and if so, it should not exceed two weeks.

ii. Survey Report Content (see NAP 401.1, Attachment 3, Appendix 3.5-C)

1) The team leader is responsible for the content and preparation of the final reports.

2) The team leader coordinates team inputs, team reviews, and factual accuracy validation.

3) The team leader delivers the final report to the surveyed organization within 30 calendar days of the close-out meeting.

iii. Survey Report Distribution

1) At a minimum, all final NNSA survey reports (and their associated transmittal letters) are sent to WQA@NNSA.DOE.GOV, to the appropriate FOM (or delegate) and all survey team members.

2) The FOM (or delegate) is responsible for formally transmitting the final survey report to the NNSA Contractor, including any corrective action response due dates.

3.5.4.e Survey Response

i. When NAP 401.1 non-compliances are identified during the survey, the surveyed organization shall initiate corrective action as early as practical (see Appendix 3.5-B).

ii. The surveyed organization has up to 30 calendar days to respond to findings in the final report.

iii. The response shall include the results of initial applicable causal analyses and resulting corrective actions for approval by F/PO or HQ WQD as applicable.

NOTE: A causal analysis is required, however a root cause analysis is more time consuming and extensive and is not expected to be part of the 30 day response.

iv. A causal analysis is required for Level 1 and 2 findings (see Appendix 3.5-B).

NOTE: The F/PO or HQ WQD may require a causal analysis for Level 3 findings, at their discretion.

v. For Level 1 findings, compensatory measures shall be applied to mitigate the condition adverse to quality and shall be in place prior to continuing work.

vi. For Level 2 and 3 findings, compensatory measures shall be applied to mitigate the condition adverse to quality based on a risk-based approach.

vii. Corrective Action Response (CAR)

1) For Level 1 and 2 findings, the CAR shall provide assurance that the surveyed organization has determined the extent and severity of the problem if it exists elsewhere.

2) For Level 1 and 2 findings, the CAR shall list both corrective and preventive actions that shall be performed, including the identification of who is responsible for the actions and the date(s) the actions shall be completed.

viii. CAR Review and Approval

1) For HQ WQD led QAS 1 and QAS 2s, HQ WQD shall determine the adequacy of corrective actions and approve the CAR.

2) For F/PO led surveys, the F/PO determines the adequacy of corrective actions and approves the CAR.

3) If the CARs are not adequate or timely, one or more of the following actions shall be taken by NNSA:

a) Direct the surveyed organizations to re-evaluate the corrective action and/or provide additional information,

b) Grant an extension of time,

c) Place affected products on Product Hold, and/or

d) Suspend production and acceptance of the affected material until satisfactory corrective action has been accomplished.

3.5.4.f Closure

i. The team leader is responsible for closing the survey.

ii. The team leader shall issue the report within 30 days of the close-out meeting.

iii. Surveyed organization notifies the team leader of completed corrective actions, with referenced evidence.

iv. The team leader shall close the assessment when all completed actions are verified by the team leader or designated representative.

3.5.5 Weapon Quality Management Assessment Process Requirements

3.5.5.a Determine Management Assessment schedules based on a risk-based approach. NNSA personnel shall follow the planning process described in NAP 401.1, Attachment 3, Section 2.2, *Quality Assurance Activities Plan*.

3.5.5.b Management Assessment Planning Process Requirements

i. Scope

1) Management Assessments shall be conducted independently on an annual basis by the HQ WQD Division Manager, F/PO Managers, and Contractor Managers to assess compliance, performance, and effectiveness of the WQMS that's applicable to their management scope and authority.

a) Management Assessments cover relevant federal and contractual quality requirements and implementing policies, programs, systems, procedures, and/or processes as well as product quality.

b) The scope should be defined by management.

2) NNSA Contractors shall perform Management Assessments per the requirements of this section or an equivalent process.

3) Scope shall address the effectiveness of relevant corrective actions from past quality surveys and assessments.

ii. Team

1) Management determines the Team Lead, size and composition of the team based on the scope of the assessment. The Team shall consist of one or more individuals.

2) Team members shall have the appropriate education, experience and clearance level to carry out their assessment responsibilities.

iii. Team Assignments

The team leader is responsible for team member assignments, including:

1) The specific areas of assessment focus, based on skills and experience;

2) Defining the report development process and assigning team member responsibilities for the report.

iv. Assessment Plan

1) Plans shall describe the scope and purpose of the Management Assessment, the criteria that shall be evaluated, a description of the methods that shall be used, the names of the team members, and the assessment dates.

2) A graded approach should be taken on the level of detail in the plan.

3.5.5.c Performing the Management Assessment

i. Opening Meeting

The team shall provide time for introductions and for clarifying assessment objectives.

ii. Collecting Evidence

1) The team shall schedule times to conduct interviews, observe work, and request additional documentation and data to review.

2) If the team cannot cover the scope during the time allotted, the final report should indicate which areas of the assessment plan were not observed.

iii. Classified Material

Use of classified material is sometimes essential to the assessment. Team members shall understand and follow all local processes and requirements.

iv. Team Coordination

The team should collaborate during the assessment to review progress, identify cross-cutting concerns, and plan the integrated activities.

v. Briefings

The team should brief appropriate management on the progress and status of the assessment. Regular communication throughout the assessment should preclude any surprises.

vi. Issues Outside of Scope

Occasionally, during an assessment, the team may identify issues that are outside the scope of the assessment. These issues should be presented to the appropriate management for evaluation and disposition.

3.5.5.d Assessment Close-out and Reports

i. Close-out Meeting

1) On the last day of the assessment, the team reviews the assessment results and conclusions with appropriate management.

NOTE: Team members should strive for consensus on assessment conclusions; however, the team leader has final decision-making authority.

2) The team provides enough detail to enable the assessed

organization to begin corrective actions and improvement as soon as possible.

ii. Assessment Report Content (see NAP 401.1, Attachment 3, Appendix 3.5-C)

1) The team leader is responsible for the content and preparation of the final reports.

2) The team leader coordinates team inputs, team reviews and factual accuracy reviews.

3) Team leader delivers the final report to management within 30 calendar days of the close-out meeting.

3.5.5.e Management Assessment Report Distribution

i. At a minimum, all final NNSA Management Assessment reports are sent to WQA@NNSA.DOE.GOV, the senior manager of the assessed organization, the FOM (or delegate) and all Management Assessment team members.

ii. F/POs shall notify HQ WQD if no weapon or weapon-related work occurred during an FY and that a Management Assessment is not required for that FY.

3.5.5.f Management Assessment Response

i. When NAP 401.1non-compliances are identified during the assessment, the management organization shall initiate formal corrective action determination with the NAP 401.1 non-compliances as early as practical.

ii. The assessed organization has 30 calendar days to respond to the findings in the final report.

iii. The response shall include the results of initial applicable causal analyses and resulting corrective actions.

NOTE: A causal analysis is required, however a root cause analysis is more time consuming and extensive and is not expected to be part of the 30 day response.

iv. A causal analysis is required for Level 1 and 2 findings. Management may require a causal analysis for Level 3 Findings, at their discretion.

v. For Level 1 findings, compensatory measures shall be applied to

mitigate the condition adverse to quality and shall be in place prior to continuing work.

vi. For Level 2 and 3 findings, compensatory measures shall be applied to mitigate the condition adverse to quality based on a risk-based approach.

vii. Corrective Action Responses:

1) For Level 1 and 2 findings, the CAR shall provide assurance that the assessed organization has determined the extent and severity of the problem if it exists elsewhere.

2) For Level 1 and 2 findings, the CAR shall list the actions (both corrective and preventive) that shall be performed, including the identification of who is responsible for the actions and the date(s) the actions shall be completed.

viii. CAR Review and Approval

Management shall determine the adequacy of corrective actions.

3.5.5.g Closure

i. The team leader is responsible for closing the Management Assessment.

ii. Management notifies the team leader of completed corrective actions, with referenced evidence.

iii. The team leader shall close the assessment when all completed actions are verified by the team leader or designated representative.

3.5.6 Records

3.5.6.a Assessment Plans, Reports, Correspondence

3.5.6.b Corrective Action Response

3.5.6.c Evidence of assessment closure.

3.5.7 References

3.5.7.a NAP 401.1, *Weapon Quality Policy*, Attachment 2, Section 2.2.2

3.5.7.b DOE-STD-1025, *Weapon Quality Assurance Area Qualification Standard*

3.5.8 Appendices

3.5.8.a Appendix 3.5-A, *Description of Survey Types*

3.5.8.b Appendix 3.5-B, *Definitions of Conclusions*

3.5.8.c Appendix 3.5-C, *Format and Content for Quality Assurance Survey and Management Assessment Reports*

APPENDIX 3.5-A

DESCRIPTION OF SURVEY TYPES

There are several types of surveys/assessments for evaluating the adequacy and effectiveness of weapon quality assurance implementation.

- **QAS 1** (Quality Management System)**:** HQ WQD (or delegate) examines how effectively the F/PO and/or NNSA Contractor implements, monitors, and improves the WQMS and its implementing policies, processes, and procedures, as well as the level of compliance with NNSA Weapon Quality requirements. These are performed on a risk based frequency as described in NAP 401.1, Attachment 3.0, Section 2.2, *QAAP*.

- **QAS 2** (Weapon Program): Where as a QAS 1 assesses the overall WQMS, a QAS 2 is generally focused on a specific system, weapon program or major assembly (and various subassemblies). QAS 2s generally include multiple team members.

  F/POs should schedule QAS 2s on programs or products that are of high consequence or at greater risk. HQ WQD may plan and coordinate a multi-site QAS 2 on a weapon program.

- **QAS 3** (Process): A QAS 3 scope is generally focused on an assembly or component, department, process or product and is not as broad as a QAS 2. The size of the team depends on the scope of the survey and may include one or more auditors.

- **QAS 4** (Operations): A QAS 4 scope is generally focused on a specific part, production or inspection operation or a procedure.

  QAS 4s may include hands-on inspections, examinations, or tests that determine the conformance of material to applicable drawings and specifications. They are usually unannounced, unless prior notification is necessary for personnel scheduling; and are often conducted when a product reaches acceptance rather than on a prescribed date.

  If the focus is to monitor delegated NNSA Contractor product inspection, stamping, or marking activities, the survey should include examination of records and/or inspections of specified products.

- **Supplier Surveys:** NNSA shall evaluate weapon program suppliers. These surveys are performed similarly to QASs described above and are coordinated with NNSA Contractors to survey their sub-contracted weapon program suppliers.

- **Management Assessments:** NNSA HQ, F/PO, and NNSA Contractors shall perform routine and annual self-assessments to assess their effectiveness in implementing, monitoring and improving the WQMS and its implementing policies, processes, and procedures, as well as the level of compliance with NNSA Weapon Quality requirements.

APPENDIX 3.5-B

DEFINITIONS OF CONCLUSIONS

Survey conclusions are positive, negative or neutral. The survey team leader should strive for team concurrence on conclusions, but if not, the team leader has the authority to make the final determination.

F/POs are required to use graded findings. The following list provides definitions of the different types of conclusions:

1. Findings are statements of fact (supported by objective evidence) where the surveyed organization is not meeting requirements of NAP 401.1. A graded approach shall be used in the identification of Findings. The three grades of Findings are:

    a. Level 1: Instance of noncompliance with NAP 401.1 requirements that shall directly impact performance, cost, or schedule if left uncorrected, and/or is indicative of serious, systemic deficiency in the assessed organization's weapon quality systems.

    b. Level 2: Instance of noncompliance with NAP 401.1 requirements and potentially indicative of either a systemic issue or of potential impact to performance or production. A number of related or repeat Level 3 Findings may "roll up" to become a Level 2 Finding.

    c. Level 3: Isolated instance of noncompliance with NAP 401.1 requirements that are easily corrected and shall not immediately impact performance or production. If corrected before the end of the survey, a Level 3 Finding shall still be noted in the close-out and in the report with a note that no further corrective action is required.

2. Noteworthy Practices are used to recognize either effective processes or programs that should be considered best practices, or areas where the surveyed organization has made significant progress.

3. Remarks are used in the following two ways:

    a. to document effectiveness issues and non-compliances that are outside the scope of NAP 401.1. These remarks are shared with the process owners for disposition independent of the Weapon Quality Survey process. The weapon quality survey report should be closed regardless of the resolution status of the remark.

    b. to document issues that do not violate NAP 401.1 requirements, but are identified as areas for weapon quality improvement.

NOTE: Several sites may use corrective action tracking systems (e.g., Pegasus) that use different terminology than what is described here. In these cases, the site should describe the equivalencies. For example: Deficiency = Level 2 Finding, Weakness = Remark, Strength = Noteworthy Practice.

APPENDIX 3.5-C

FORMAT AND CONTENT FOR QUALITY ASSURANCE SURVEY AND MANAGEMENT ASSESSMENT REPORTS

UNIQUE NUMBER: A unique number shall be assigned to each survey or assessment report.

An Introduction which includes:

1. The Survey or Assessment Title and Unique Number for the survey.
2. Survey or Assessment locations.
3. The Survey or Assessment dates.
4. The names of the Survey or Assessment Team members, identifying the team leader.
5. The date of the report.
6. Report Approvals.

SUMMARY: Describes the scope and purpose of the survey or assessment. Also identifies and discusses the strengths, findings, weaknesses and the supporting evidence observed by the team. It also includes the names of the team members, a brief summary of recent quality history and trends, and a timeframe that a corrective action response is due.

This section should also include a discussion of issues that were identified that may be outside the authority of the assessed organization to correct. Examples include configuration control issues at another site, or perhaps noting that HQ requirements are ambiguous or contradictory. These shall be brought to the attention of HQ WQD to determine appropriate action.

RESULTS: Group results using the elements of NAP 401.1. If the assessment also addresses other contractual weapon quality requirements, this should be listed under separate headings.

Results should be written for every element addressed during the survey. Results shall always include a factual description of what was looked at, reviewed, observed, or learned through interviews. The results should support an overall conclusion.

Findings shall quote the specific requirement in that section. Findings should be concise but shall provide sufficient detail to ensure the surveyed organization can analyze the finding and take appropriate corrective and preventive actions. The report shall identify areas where a response is necessary. When adequate corrective action is taken during the survey, the report still includes the finding, with a note that the issue is satisfactorily resolved and that no further response is required. Teams should identify areas that represent opportunities for improvement, but should avoid explicit recommendations. Survey teams shall remain in a position to objectively evaluate the adequacy of actions taken.

APPROVAL: Survey and Assessment reports shall be approved by the team leader.

4.0 NONCONFORMING MATERIAL

4.1 NONCONFORMANCE MATERIAL REPORT

4.1.1 Purpose

The Nonconforming Material Report (NMR) documents the identification, notification, and disposition of suspect or nonconforming material that is shipped between NNSA sites.

4.1.2 Policy

Suspect or nonconforming material shipped between NNSA sites, or material incorrectly shipped, shall be reported and investigated to applicable requirements. Disposition of affected material shall be documented. The process should be completed expeditiously to support mission requirements.

4.1.3 Responsibilities

4.1.3.a HQ WQD shall

i. oversee implementation of the NMR process;

ii. resolve issues presented by the F/PO;

iii. analyze nonconforming report information from all sites to identify systemic issues and programmatic impact; and

iv. communicate NMR-related trends and issues to F/PO and NNSA Federal Program Managers.

4.1.3.b F/POs shall

i. communicate suspect or nonconforming conditions to the affected F/PO(s) and provide input and updates, as necessary, to HQ WQD;

ii. issue NMRs to the affected F/PO (s) and provide a copy to HQ WQD;

iii. assist NNSA Contractor investigation into extent of condition and disposition of material;

iv. coordinate with the responsible Federal Program Manager (FPM) and HQ WQD regarding any recommended product hold or production stop;

v. issue product holds or production stops to the NNSA Contractor,

upon written notification from FPM;

vi. ensure NNSA Contractors respond to the conditions and follow applicable quality requirements;

vii. consider directing the NNSA Contractor to provide corrective action responses (CARs); and

viii. review and approve the corrective action response submitted by the appropriate NNSA Contractor.

4.1.3.c NNSA Contractors shall

i. report to the F/PO when it is discovered that suspect or nonconforming material was shipped or received between geographic located NNSA sites;

ii. through responsible Design Agency and Production Agency coordination and based on associated risks of nonconformance, provide recommendation to F/PO, responsible FPM and HQ WQD regarding product hold or production stop;

iii. control nonconforming (suspect) material through traceability, segregation, identification, product hold or production stop;

iv. perform the following in a timely manner:

1) As necessary, provide additional information;

2) Investigate the extent of condition;

3) Evaluate and determine disposition of nonconforming material;

4) Perform causal analysis and develop CARs. Provide corrective action responses as directed by F/PO; and

5) Perform appropriate disposition.

v. maintain and report metrics to the F/PO (including Grade 3 non-conformances that are not reported as part of the NMR process).

4.1.4 Nonconforming Material Report Process

4.1.4.a See Appendix 4.1-A for NMR numbering scheme and category descriptions, Appendix 4.1-B for NMR grading criteria, and Appendix 4.1-C for an example NMR form.

4.1.4.b Initial notification

i. The discovering NNSA Contractor promptly notifies their F/PO when suspect or nonconforming material has been shipped or received and provides identification information (e.g., nomenclature, part number (P/N), manufacturer's code, serial number (S/N), date code, lot number, shipper number, nonconformance description).

ii. The notified F/PO communicates the material condition to the affected F/POs.

iii. Exclude any data that would cause the report to be classified.

4.1.4.c Material in Hold Status

i. A hold status is used to temporarily restrict use of NNSA-accepted product that has been shipped to another contractor when the quality is questionable, but there is no specific reason to withdraw acceptance (see Section 4.0 of this Attachment, *Nonconforming Material*).

ii. Stamping is altered as applicable based on product disposition determination.

4.1.4.d Investigation and NMR Issuance

i. Until disposition is determined, affected sites control nonconforming (suspect) material through traceability, segregation, identification, product hold or production stop as applicable.

ii. F/POs coordinate with NNSA Contractors to investigate conditions and determine initial disposition. Information is documented on an NMR (see Appendix 4.1-C).

1) An Incoming Material Report (IMR) is generated when the receiving NNSA Contractor discovers the suspect or nonconformance.

2) A Shipped Material Report (SMR) is generated when the shipping NNSA Contractor discovers the suspect or nonconformance.

NOTE: SMRs should include brief description of how the issue was identified in the "Pertinent Circumstances of

Discovery" field.

iii. If the nonconformance is Grade 3 (see Appendix 4.1-B for definition), the F/POs may agree to allow the respective NNSA Contractors to resolve the issues between themselves and not issue an NMR.

iv. Action(s) shall be taken to ensure systemic issues are addressed.

v. The notified F/PO issues the NMR to the affected F/PO(s) and provides a copy to HQ WQD.

vi. Through responsible Design Agency and Production Agency coordination and based on associated risks of nonconformance, affected sites provide recommendation to F/PO, responsible FPM and HQ WQD regarding product hold or production stop as applicable.

vii. Upon written notification from FPM, issue product hold or production stop.

4.1.4.e Disposition

i. F/POs ensure NNSA Contractors coordinate to perform disposition (e.g., correcting shipment paperwork, changing the quality acceptance status, stamp modification, product return or scrap) following applicable quality process requirements.

ii. Material that needs to be returned to the originating NNSA Contractor for investigation shall be shipped in a timely manner.

4.1.4.f Corrective Action

i. The responsible NNSA Contractors identify corrective actions.

ii. If during the investigation or causal analysis phase it is determined that issues extend beyond the shipping and receiving sites (for example PA identifies issues with design), communicate the concerns with HQ WQD and the respective F/PO(s).

iii. NOTE: This means that a DA may be required to jointly or individually respond to an NMR for situations where the design is a contributing cause of the suspect or nonconforming condition.

iv. CARs for Grade 2 and 3 NMRs are at the discretion of the responsible F/PO.

4.1.4.g Updates and Close Out:

i. If necessary, NMRs can be revised.

ii. If an NMR is issued before the material disposition is known (SXR, scrap, return, etc), the NMR shall be revised to reflect the final disposition details.

iii. Revised NMRs are distributed following the original NMR issuance circulation.

iv. Responsible F/POs track and close NMR following local requirements.

v. Applicable NMR-related metrics and status information are reported in the F/PO Quality Reports.

4.1.5 Records. Nonconforming Material Report (IMR or SMR)

4.1.6 References. NAP 401.1, Weapon Quality Policy, Section 3.12, *NONCONFORMANCE*

4.1.7 Appendices

4.1.7.a Appendix 4.1-A: Nonconforming Material Reports

4.1.7.b Appendix 4.1-B: Nonconforming Material Reports-Grade Levels

4.1.7.c Appendix 4.1-C: Nonconforming Material Report Form

APPENDIX 4.1-A

NONCONFORMING MATERIAL REPORTS

NMR Number: The NMR number is comprised of the following elements in sequence

- Whether the report is an IMR or SMR
- The plant (See Appendix 3.1-G) for which the F/PO is issuing the report
- The fiscal year (4-digit) in which the suspect or nonconformance was discovered
- The plant (See Appendix 3.1-G) for which the F/PO is receiving the report
- The next IMR/SMR number in the issuing F/POs sequence

For example, IMR LA-2014-SS-01 means this is the first nonconforming item reported by NA-LA to SFO for products received from Sandia in FY14 or SMR KC-2014-PX-01 which means this is the first suspect or nonconforming item identified by KCP and reported by KCFO to NPO/PX for material shipped by KCP in FY14.

NMR Categories:

1. Records: Any accompanying quality records with missing or incorrect entries (e.g., incorrect Record of Assembly (ROA), wrong part number or serial/lot number, or incorrect testing data).

2. Marking: Manufacturing identification does not comply with specification requirements or incorrect or missing Quality Stamp (e.g., wrong suffix on part/package, missing IP stamp).

3. Surface condition and foreign material: Physical damage or contamination not allowed per specification requirements (e.g., dents/scratches in critical sealing surfaces, coatings outside of allowed boundaries, surface discoloration).

4. Assembly: Part does not assemble, has incorrect components installed, incorrect material or process used, missing components or mis-packaged for shipment (e.g., missing washer, wrong suffix of component, missing packaging material, packaged upside down).

5. Functional: The part/assembly fails to mechanically operate as intended or incorrect mechanical test performed (e.g., rotating part does not rotate, leak test not performed).

6. Dimensional: Part does not meet dimensional drawing requirements (e.g., radius too small, stem height wrong).

7. Electrical: Failure to meet electrical tests (e.g., resistance test failed).

8. Other: Describe the nonconformance that does not fit the other categories.

APPENDIX 4.1-B

NONCONFORMING MATERIAL REPORTS – GRADE LEVELS

NMR grade levels:

1. Grade 1 – Failure to meet design definition requirement(s). Material does not meet form, fit or function. A corrective action is required. Categories typically include: 3 (Surface condition and foreign material); 4 (Assembly); 5 (Functional); 6 (Dimensional); or 7 (Electrical).

2. Grade 2 – Failure to meet design definition requirement(s) but material meets (or is likely to meet) form, fit and function, may require further investigation and corrective action. Corrective action requirements are at the discretion of the responsible F/PO. Categories typically include: 1 (Records examination); 2 (Marking); or 3 (Surface condition and foreign material).

3. Grade 3 – Design definition requirements are met but there are issues with other quality requirements (for example shipping documents are incorrect). Responsible F/POs determine if Grade 3 NMRs may be handled between Contracting sites and if corrective actions are required.

APPENDIX 4.1-C

NONCONFORMING MATERIAL REPORT FORM

To:

CC: HQ WQD (wqa@nnsa.doe.gov)

From (Print and Sign):

Date:

Check one of the following and include a number and date of discovery:

☐ Incoming Material Report	IMR -	Rev:	Date:
☐ Shipped Material Report	SMR -	Rev:	Date:

Fill in as much of the following information as possible (fields will expand as necessary):

Part identification information:

- Part Number and Suffix:
- Nomenclature:
- Manufacturer Code, Serial Number, Date Code, Lot Number:
- Quantity:
- Other:

Specifications or criteria used to determine the discrepant condition:

Description of the discrepant conditions:

Pertinent circumstances of discovery:

Material disposition:

Discrepant category: Check all that apply:

☐ 1. Records: Any accompanying quality records with missing or incorrect entries (e.g., incorrect Record of Assembly (ROA), wrong part number or serial/lot number, or incorrect testing data)

☐ 2. Marking: Manufacturing identification does not comply with specification requirements or incorrect or missing Quality Stamp (e.g., wrong suffix on part/package, missing IP stamp)

☐ 3. Surface condition and foreign material: Physical damage or contamination not allowed per specification requirements(e.g., dents/scratches in critical sealing surfaces, coatings outside of allowed boundaries, surface discoloration)

☐ 4. Assembly: Part does not assemble, has incorrect components installed, incorrect material or process used, missing components or mispackaged for shipment (e.g., missing washer, wrong suffix of component, missing packaging material, packaged upside down)

☐ 5. Functional: The part/assembly fails to mechanically operate as intended or incorrect mechanical test performed (e.g., rotating part does not rotate, leak test not performed)

☐ 6. Dimensional: Part does not meet dimensional drawing requirements (e.g., radius too small, stem height wrong)

☐ 7. Electrical: Failure to meet electrical tests (e.g., resistance test failed)

8

☐ 8. Other. Describe the nonconformance that does not fit the other categories:

Check the highest grade that applies:

☐ Grade 1 – Failure to meet design definition requirement(s). Material does not meet form, fit or function. A corrective action response is required. Categories typically include: 3 (Surface condition and foreign material); 4 (Assembly); 5 (Functional); 6 (Dimensional); or 7 (Electrical).

☐ Grade 2 – Failure to meet design definition requirement(s), but material meets (or is likely to meet) form, fit or function. Issues with shipment other than form, fit and function that may require further investigation and corrective action. Corrective action requirements are at the discretion of the responsible F/PO. Categories typically include: 1 (Records examination); 2 (Marking); 3 (Surface condition and foreign material); 8 Verification Inspection; or 9 (Other).

☐ Grade 3 – Design definition requirements are met but there are issues with other quality requirements (for example shipping documents are incorrect). Responsible F/POs determine if Grade 3 NMRs may be handled between Contracting sites and if corrective actions are required.

Remarks:

4.2 DOCUMENTING SPECIFICATION EXCEPTION RELEASE CORRECTIVE ACTIONS

4.2.1 Purpose

Identify the minimum corrective action documentation requirements for a Specification Exception Release (SXR) in order to ensure traceability and tracking of associated corrective actions.

4.2.2 Policy

4.2.2.a Corrective action referenced herein is the NAP 401.1, Attachment 2, Section 3.13 corrective action process incorporated in the Contractor's Weapon Quality Assurance Program.

4.2.2.b A corrective action determination shall be made for each SXR issued and documentation of the determination along with minimum corrective action information (identified below) shall be included in the SXR.

4.2.3 Responsibilities

4.2.3.a HQ WQD shall

i. oversee implementation of these requirements; and

ii. coordinate resolution of issues presented by the F/PO.

4.2.3.b F/POs shall

i. oversee effective Contractor implementation; and

ii. assist in resolution of issues related to these requirements.

4.2.3.c NNSA Contractors shall

i. determine if corrective action is warranted to preclude recurrence of the nonconformance(s) being deviated by the SXR;

ii. document in the corrective action section of the SXR when corrective action is not warranted as follows:

1) state "NONE"; and

2) document the justification for NO corrective action required.

iii. document in the corrective action section of the SXR when

corrective action is warranted as follows:

1) state the Contractor who is responsible for the corrective actions; and

2) document the Contractor corrective action system "identifier" for the corrective action response (CAR) to enable traceability and tracking within the contractor's corrective action process.

4.2.4 Records

4.2.4.a SXR

4.2.4.b Corrective action process documentation

4.2.5 References

4.2.5.a NAP 401.1, Attachment 2, Sections 3.12, *Nonconformance* and 3.13, *Corrective Action*

4.2.5.b TBP – 404 AND 702

4.3 QUALITY ALERT REPORTING

4.3.1 Purpose

Suspect items that may need to be reported through a Quality Alert that ensures that Production Agencies (PA), Design Agencies (DA) and Office of Inspector General (OIG) as appropriate are notified and appropriate action is taken for unique problems related to purchased components, material, and services that affect quality, reliability, or product safety.

4.3.2 Policy

4.3.2.a. Information about unique problems related to purchased components, material, and services shall be shared and investigated throughout Nuclear Security Enterprise (NSE). Examples of unique problems include but not limited to deficiencies in supplier product processing, falsified certifications, suspect items, counterfeit parts, and the use of incorrect materials. This also includes malicious hardware and software getting into the NSE supply chain.

4.3.2.b. The process for identification and notification of unique problems may overlap with existing processes for Suspect/Counterfeit Items (S/CI). S/CI notifications should be reviewed to determine any potential impact to weapons and weapon-related material and shall be shared with other F/POs, DA's, PA's, OIG and HQ WQD. Conversely, any unique

problems that are identified should be evaluated to ensure that the S/CI process requirements, as defined in DOE O 414.1, *Suspect/Counterfeit Items Prevention*, are followed.

4.3.3 Responsibilities

4.3.3.a. HQ WQD shall

i. review Quality Alerts from the F/POs;

ii. review actions taken by sites in response to Quality Alerts; and

iii. close out Quality Alerts.

4.3.3.b. F/POs shall

i. notify all F/PO Quality Assurance Organizations and HQ WQD when unique problems are identified;

ii. investigate and distribute Quality Alerts to F/POs, the applicable Design Agency, HQ Weapons Program Office, HQ WQD and Office of the Inspector General;

iii. review Quality Alerts that are identified at other sites for applicability;

iv. direct the contractor to investigate any Quality Alerts and, if applicable, ensure appropriate actions are identified and implemented; and

v. communicate results and any actions taken to recommend Quality Alert closure to HQ WQD.

4.3.3.c. Contractors shall

i. maintain processes to identify, investigate, and report unique quality problems, as required by Weapon Quality Policy (NAP 401.1), Section 3.12.1 and DOE O 414.1, *Suspect/Counterfeit Items Prevention*; and

ii. respond to F/PO requests for additional information.

4.3.4 Quality Alert Process

4.3.4.a. Identification and notification (Contractors)

i. Identify unique problems related to purchased components, material, and services that affect quality, reliability, or safety of

weapons or weapon-related material.

1) Unique problems may be identified through contractor S/CI processes or by other means.

2) All S/CI issues shall be reported to the local Office of the Inspector General and F/PO.

ii. Immediately notify the F/PO of the unique problems.

4.3.4.b. F/PO Reporting

i. Direct the contractor to further investigate (as needed) and provide documented information and corrective action(s).

ii. Prepare Quality Alert Report as follows:

1) Number reports - XX CC DD

a) XX is fiscal year,

b) CC is the sequential number for that FY from that F/PO, and

c) DD is the facility reporting (see Appendix 3.1-G of this Attachment for F/PO abbreviations).

2) Reports should include as much of the following information as possible and appropriate:

a) Facility reporting;

b) Manufacturer;

c) Part Number and/or item description;

d) Problem description and date identification; and

e) Actions taken, if any.

3) Quality Alert Reports should include the following disclaimer:

"This report was prepared by an agency of the United States Government. The contents shall not be divulged outside the NNSA without the approval of the HQ WQD Director. Approved external recipients shall not divulge the information to others."

iii. Distribute the Quality Alert Reports to other F/POs, HQ WQD, HQ Weapon Program Office, applicable Design Agency, as necessary and the local Office of the Inspector General.

iv. Any subsequent communication regarding these reports shall reference the report number and shall include HQ WQD on distribution.

v. Oversees actions taken by Contractors.

4.3.5.c. Close-out

i. F/POs shall

1) forward Quality Alert Reports to the Contractor for action, as necessary;

2) oversee and evaluate corrective action(s) taken by the Contractor;

3) provide status to HQ WQD as soon as practicable; and

4) recommend closure of Quality Alert Report(s) to HQ WQD when all actions taken by Contractors have been completed and verified.

ii. HQ WQD shall

1) review Contractor actions reported by F/POs; and

2) report closure of Quality Alert Report and distribute to F/POs and, as necessary, HQ Weapon Program Office and OIG.

4.3.5 Records

4.3.5.a. Contractor Records: Quality Alert Response

4.3.5.b. F/PO Records

i. Quality Alert Report

ii. Closure recommendation to HQ WQD

4.3.5.c. HQ WQD Records: Quality Alert Report closure

4.3.6 References

4.3.6.a. DOE O 414.1, *Quality Assurance*

4.3.6.b NAP 401.1, *Weapon Quality Policy*, Attachment 2, Section 3.12.1