DCMA NSEO MANUFACTURING PROCESS REVIEW (MPR) CHECKLIST #33

FABRICATION AND ASSEMBLY

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| **SUPPLIER & CAGE:** |  |
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| **LOCATION:** |  |
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| **PROCESS REVIEWED:** |  |

**Program Type:**

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|  | Level I/SUSBAFE (LI/SS) |  | Navy Propulsion Program (NPP) |  | Deep Submergence Systems/Scope of Certification Program (DSS-SOC) |
|  | Nuclear Plant Material (NPM) |  | Naval Nuclear Propulsion Program (NNPP) |  | Aircraft Launch & Recovery Equipment (ALRE) |
|  | Fly By Wire Ships Control Systems (FBWSCS) |  | Ships Critical Safety Items (SCSIs) |  | Other: |

**Contractual Requirement(s) for this Process:**

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**Supplier Procedure Number(s), Title(s) & Revision Level(s)/Date(s):**

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| **Process Reviewed By:** |  |
|  |  |
| **Date(s) of Review:** |  |
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**Process Concerns and Guidance:**

* Fabrication and assembly results and accompanying documentation are incorrect, incomplete or missing.
* Fabrications and assemblies not performed or performed incorrectly
* Fabrication and assembly from incorrect drawing revision
* Visual inspection and cleanliness of items
* Lot sample sizes incorrect
* Contractor personnel may not be properly trained to perform fabrication and assembly.
* Some contractors may rely on the QAR’s inspection records and results to ensure fabrication and assembly compliance and justification to deliver products to the Government.

**A**. **MANPOWER:**

1. Are the personnel performing the manufacturing, testing, and quality assurance functions of the appropriate skill/experience level and/or properly trained/certified to produce conforming product? ***What are the requirements? Record all processing operations observed (include type and specification, where applicable) and the corresponding operators’ names. Did you verify QA/QC proficiency in measuring/test performance? Record names and tests or measurements witnessed, and equipment used.***

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1. Are any personnel certifications expired and are the personnel still working in the process?

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1. Are training records available (review sample) and are they accurate and complete?

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1. Are the credentials of the training/certification official in accordance with specification requirements? ***What are the requirements?***

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1. Is there a system in place for remedial training when errors occur?

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**B. MATERIALS**:

1. For Level I material, is the product controlled and traceable throughout the process?

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1. Are certifications for raw materials used in the process reviewed for acceptance and maintained on file for review?

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1. Do the raw materials comply with contract/specification and/or supplier-imposed technical requirements, including the prohibition of reclaimed material as may be required? ***What were the materials reviewed?***

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1. Are there controls to ensure conforming material is consistently used in the process?

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1. Was the material's integrity compromised by further processes and/or practices? ***If so, how?***

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**C. MACHINERY**:

1. Is **manufacturing equipment** (tooling, fixtures, jigs, temperature controllers, ammeters, voltmeters, etc.) adequate to produce/assess conforming supplies in compliance with contractual specifications and drawing(s)? *What Items were sampled and were they part of the supplier’s calibration program and within the calibration/check cycle?*

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1. Is **inspection and testing equipment** of the required adequacy, accuracy, precision, and range to assure supplies produced comply with specifications and drawings? *What Items were sampled and were they part of the supplier’s calibration program and within the calibration/check cycle?*

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1. Are calibrated tools used in the inspection and test process current, adequate and traceable to certifications?

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1. Does equipment (to include fixtures, jigs, and software [ATE]), requiring qualification or certification approval, have contractual approval for use? *For software, was the correct software in use? What program(s) and revision level(s)/date(s) was in use?*

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1. Is Government owned equipment adequately protected/maintained in accordance with a documented process?

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**D**. **METHODS**:

1. Does the supplier have a documented and established inspection system, and are inspection instructions readily available and utilized by personnel? Record QA/QC Manual Number and Date Approved.

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1. Does the supplier inspect or verify that subcontracted fabrication and assembly processes are audited, documented and approved for use per contract requirements?

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1. Do the supplier’s procedures state fabrication and assembly methods and accept/reject criteria, and are they clearly documented and understood by personnel?

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1. Review and identify a sample of fabrications and assemblies being performed by supplier personnel in accordance with procedures, and record number of samples and the result of the review.

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1. Is there an over check program in effect to confirm worker's or inspector's results on a sampling basis and is it known to exist by the workers/inspectors?

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1. Are work instructions, drawings/specifications, etc. readily available to personnel during fabrication and assembly, are they of the correct revisions for their intended function/purpose, and are they being used where applicable?

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1. Are inspection records and data compiled to clearly identify the results of fabrications and assemblies performed and include traceability back to the procedure, lot/heat numbers, instruments used, personnel who performed each fabrication and assembly and the finished product inspected?

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1. Does a procedure exist for the rework of any fabricated or assembled product that requires rework?

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1. Are records documented satisfactorily? In ink utilizing "line thru", initial and date procedures for errors?

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1. Do fabrication and assembly operations have in-process inspections or checkpoints and are the results documented?

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1. Is material/product, which has been through the fabrication and assembly process, positively controlled, traceable, and have the inspections/tests performed been documented to provide a positive indication of the inspection status of the material (e.g. individual inspected, operation sign-off, inspection stamped/initialed/signed accepted or rejected)?

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1. Are fabrication and assembly work instructions/procedures, travelers, etc. available to the personnel performing the tasks clear, current (latest revision), and adequate, especially for proper configuration and orientation per specification and contract requirements, and are personnel following these documents? ***What documents (identifying number & rev) were reviewed?***

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1. Is the product adequately identified with the proper documentation and certifications to provide clear material traceability throughout the products’ processing and does the product match the documentation?

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1. Are changes to methods (instructions) controlled and translated adequately and timely to affected personnel?

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1. Are there adequate methods of segregating accepted and rejected material in use? (e.g. materials awaiting inspection, are they identified and segregated from materials which have been accepted or rejected? **Describe.**

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1. Is there supplier data available for analysis that can substantiate the effectiveness or ineffectiveness of the inspection and testing processes? ***If available, what data was reviewed, and what does the data indicate?***

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1. Are precautions in place to prevent damage and/or contamination to product during and in between fabrication and assembly processes?

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**E.** **ENVIRONMENT**:

1. Is the process conducted under controlled environmental conditions (clean room, humidity/temperature, etc.) as required by contractual and/or supplier-imposed technical requirements? ***What are the environmental conditions and are they monitored (charts, gages, etc., within calibration)?***

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1. Does the supplier observe ESD practices, if applicable? Is safety equipment available and in use, if needed? ***What are the safety requirements for this process?***

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**F. PRODUCT EXAMINATION:**

***The QAR must perform a product examination in order to verify the output of the process being reviewed and document the results below.***

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| Date(s) Conducted: |  |
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| Product Examination Performed By: |  |
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| Contract Number(s): |  |
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| Part Number(s)/Serial number(s): |  |
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| Part Nomenclature(s): |  |
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| Supplier Personnel Contacted and Titles: |  |
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| Drawing Number & Revision: |  |
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| Lot Size and Sample Size: |  |

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| Characteristics Examined: | # Observations |
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1. Identify the inspection methods (W, I, T, V) used to verify conformance with procedures and standards:

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| **W** |  |  | **I** |  |  | **T** |  |  | **V** |  |

**PE Comments/Concerns**

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| **Overall MPR Results:** | **SATISFACTORY** |  | **UNSATISFACTORY** |  |

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| **Corrective Action Generated?** | **No** |  |  | **Yes** |  |  | **CAR#** |  |

FOLLOW-UP ACTION REQUIRED?

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**SUMMARY/NOTES/COMMENTS/CONCERNS**:

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