

Documents for Ship Cost Reduction

Study Guide

Modify NVR Part 8 Relative to MIL-STD-1689A and NAVSEA S9074-AR-GIB-010/278 Fabrication Documents

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NSRP SP-7 Meeting

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Documents for Ship Cost Reduction

- Initiative by VADM McCoy (NAVSEA 00)
- “Ships cost too much!”
- Effort supports the 313 ship goal and is backed by the CNO
- We don’t know the cost of our specs and standards
- “Find stuff we no longer need or no longer can afford”
- Need to establish facts on
 - Design and production costs (including training and qualification)
 - Test and inspection costs
- Eliminate future costs and gain savings on current contracts
- “Walk the deck plates”
- Start with “Top 10”
- More efforts will follow these in FY-10

DSCR – “Top Ten” (7 Study Guides)

- MIL-S-901 Shock Technical Area
- MIL-STD-167 Vibration Technical Area
- MIL-STD-740 Airborne- and Structure-Borne Noise
- **Modify NVR Part 8 Relative to MIL-STD-1689 and MIL-STD-278 Fabrication Requirements**
- MIL-M-17060 Motors, 60 Cycle, Alternating Current, Integral HP, Shipboard Use
- MIL-STD-777 Schedule of Piping, Valves, Fittings and Associated Piping Components for Naval Surface Ships
- MIL-DTL-16036 Switchgear, Power, Low Voltage, Naval Shipboard in conjunction with use of MIL-Spec circuit breakers (MIL-C-17587, MIL-C-17361)
- MIL-STD-461E - Electromagnetic Interference (EMI)
- MIL-STD 464A – Electromagnetic Environmental Effects (E3) Requirements for Systems
- NTIA “Red Book” (Radar Interface Specifications)

General Questions for Shipbuilders

For a given requirement:

1. Which labor centers are affected by the requirement?
2. Does the requirement add value to assurance of sound welds/fabrications?
3. Is the requirement worth the cost of implementation?
4. Does the requirement add unnecessary work?
5. Is the requirement commensurate with the criticality of the system upon which it is imposed?
6. Does the requirement constrain innovation or flexible work practices of an activity to cost effectively fabricate systems and components?

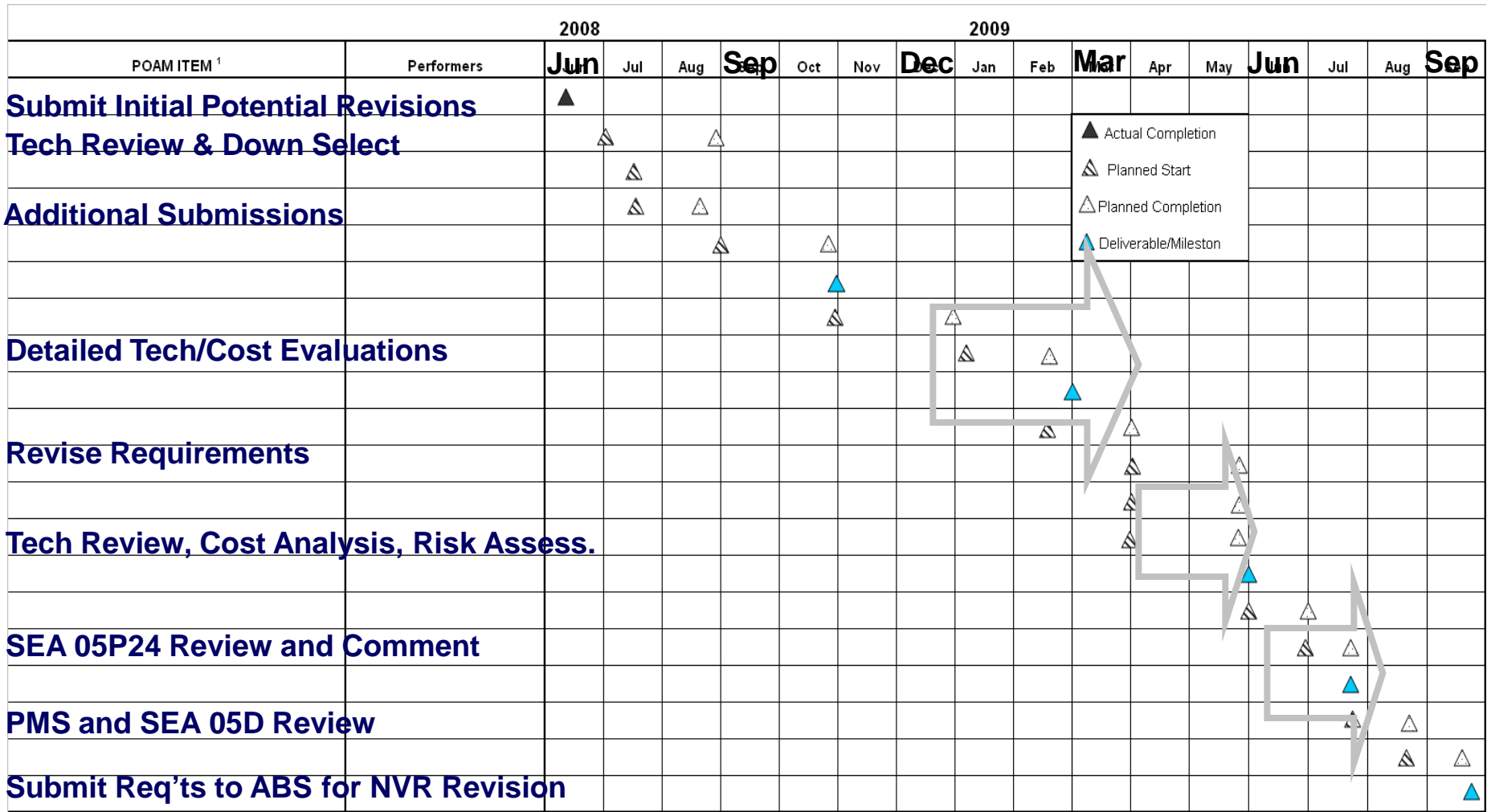
For a given requirements change that affects processes, quantify the cost impact on:

7. Redesign
8. Installation costs.
9. Testing / qualification costs.
10. Recordkeeping
11. Other costs (specify).

For a given requirements change that affects a specific component, quantify the cost impact to the OEM for

12. The redesign costs of such a change.
13. The qualification costs of such a change.
14. Cost/price of the component?
15. What is total cost of the requirements change (Derived from questions 7-14)?
16. What is the cost savings of the requirements change compared to the current process/component?
17. What is the risk of imposing the requirements change?

Process Roadmap



1. Monthly project telecons will be held to update status

2. The following shipbuilders will be asked to participate: EB, BIW, NASSCO, Newport News, Ingalls, Avondale, Austal, Marinette Marine

NSRP Shipbuilder White Paper

- Specification content, invocation, and interpretation
- Documents
 - All welding specifications – 1 (Spec-)
 - MIL-STD-1689 (NVR 8.3.02 version) – 6 (NVR-)
 - NAVSEA S9074-AR-GIB-010/278 – 15 (278-)
 - NVR 8.3.02 version / 8.3.5 – 2 (NVR-)
 - NAVSEA S9074-AO-GIB-010/248 – 11 (248-)
 - NAVSEA T9074-AS-GIB-010/271 – 3 (271-)
- Issues and recommendations/alternatives
- Risk difficult to quantify
 - Higher risk for testing, temperature, and material requirements
 - Less risk for training and documentation changes

Risk assessment / cost study will be important

NSRP Support for DSCR

- **NSRP has \$700K from NAVSEA to support SY involvement for FY-09**
 - **Discuss issues and alternatives**
 - **Develop cost savings data**
- **All currently active Task Orders for this task extended to 29 Aug 09**
 - **When NSRP/NAVSEA Joint Funding Agreement is renewed, Task Orders will be extended to 2010**

NSRP Shipbuilder Support Process

- **Request by NSWCCD 611 and Shipbuilder team**
 - Identify support required (meetings, technical evaluation, cost evaluation)
 - Identify POC's
- **Forward request, via NSWCCD Code 9460 (Tom Konen), to ATI (Jim House / Justin Montague)**
- **ATI forwards request to Shipbuilder NSRP representative**
- **NSRP representative to ensure funds are in place and available at Shipbuilder**
- **Teams keep NSWCCD 9460 and ATI informed of progress**

Issues Moving Forward - 1

I.D.	Issue
NVR-3	Diffusible hydrogen testing at Shipbuilder
NVR-4	Preheat requirements by carbon equivalent
NVR-5	Flame gouging prohibition
NVR-6	AI weld reinforcement removal/requirements
NVR-7	ABS list of approved mfrs. <i>vice</i> lot conformance testing
NVR-8	Consumables requirements in NVR 8.3.5
278-5	Req'ts for structural welds on P-1 piping systems
278-7	Non-critical dissimilar metal welds
278-13	Alternative NDT (vs. pressure testing) for piping closure welds
278-15	Coating pipe welds before hydro testing
Spec-1	Web site for official NAVSEA spec req'ts interpretations (248-9)

Issues Moving Forward - 2

I.D.	Issue
248-1	Procedure qualification to ASME <i>vice</i> TP 248 to eliminate NDE
248-2	Standard welding procedure specs / SY procedures for vendors
248-3	Butt welding req't for fillet and socket welds not in MIL-STD-1628
248-4	Requal of 2 nd source for ceramic backing material
248-5	Production heat inputs limited to procedure qualifications
248-6	Requirements for duplex stainless steels
248-7	Classroom training for welder qualification
248-8	Transferring workforce performance quals between activities
248-9	Web site for approved materials updates (Spec-1)
248-11	Procedure qual for thin-wall piping socket joints
271-3	Use ASME codes for pipe weld quality compliance

Draft of Jim House Memo

NSRP Specs Team,

I have several updates to give you regarding NAVSEA's Documents for Ship Cost Reduction (DSCR) effort. First, NSRP received \$700K in funding from NAVSEA to support shipyard involvement in the effort through 2009. As you will see below, shipyard involvement will primarily be supporting visits by the Navy Technical Teams to discuss current issues/alternatives/cost savings data regarding their subject specifications. Second, all currently active Task Orders for this effort have been extended until August 29, 2009. Once NSRP's Joint Funding Agreement with NAVSEA is renewed, the Task Orders can be extended until 2010. Last, the DSCR effort is picking up momentum again – now that budget approvals and administration changes are behind it – and NAVSEA has outlined the rough visit plan for the first half of 2009, and the support required of the yards being visited. Hopefully this will bring in to focus what – for lack of a better term – is the shipyards' Statement of Work within the DSCR initiative.

Below please find the list of specifications currently being addressed by NAVSEA, the rough visit plan and a description of the support being requested from NSRP. If you are contacted for a visit by the Navy Technical Teams, please keep me or Justin Montague (843-760-3339, justin.montague@aticorp.org) informed so we can track progress. If the funding remaining on your current Task Order will not support further efforts, contact Justin or me for a modification. And finally, please invoice for any work performed to date so that our records and accounting of the DSCR initiative is accurate.

As always, do not hesitate to contact me or Justin with questions or concerns.

Specifications Being Addressed

1. MIL-S-901, Shock Technical Area
2. MIL-STD-167, Vibration Technical Area
3. MIL-STD-740-1&2, Airborne and Structure-borne Noise
4. Welding (modify NVR Chapter 8 relative to MIL-STD-1689 and MIL-STD-278)
5. MIL-M-17060, 60-cycle AC Motors
6. MIL-DTL-16036, Low Voltage Switchgear
7. MIL-STD-777, Schedule of Piping, Valves, Fittings, and Associated Piping Components for Naval Surface Ships
8. MIL-STD-461E, Electromagnetic Interference (EMI)
9. MIL-STD-464A, Electromagnetic Environmental Effects Requirements for Systems
10. MIL-STD-469B, National Telecommunications Information Administration, Chp. 5

Draft of Jim House Memo (cont'd)

Remember that some specifications are being addressed with GFE/CFE suppliers.

2009 Visit Plan

BIW – Shock Team(2 trips), Welding Team, Piping Team, EMI Team, Vibration Team

NGSB-GC – Shock Team(2 trips), Piping Team, EMI Team

NGSB-NN – Piping Team, Vibration Team

NASSCO – EMI Team

NSRP Electrical Technology Panel – Switchgear Team (2 tips)

Total of 15 visits planned to be complete by May of 2009

Shipyard Support Requested

- 1. Provide cost breakdown (design, materials, testing, etc.) data relevant to the DSCR specifications.**
- 2. Attend meetings for open discussions on the cost impact of the DSCR specifications with NAVSEA Technical Warrant Holders or their representatives. Provide meeting minutes to NAVSEA DSCR team leads.**
- 3. Provide cost data per equipment acquisition, specification test and/or acquisition program in white paper format.**
- 4. Develop recommendations, identify risks and conduct open discussions on specification improvements – to include reducing, modifying or eliminating candidate requirements.**
- 5. Respond to surveys and questionnaires submitted by NAVSEA Technical Warrant Holders with regard to content and cost of the DSCR specifications.**