

VENDOR INFORMATION FOR THE NAVAL SUPPLY WEAPONS SYSTEM SUPPORT

LEVEL I/SCOPE OF CERTIFICATION (LI/SOC)

STOCK PROGRAM

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Introduction:

The following information is provided for vendors interested in furnishing material to the Navy for the LI/SOC Stock Program. This information is intended to acquaint the potential supplier with the stringent quality requirements and other pertinent program related information necessary to become an acceptable supplier. Potential suppliers are cautioned that this program is most likely much more stringent and unlike any other work performed on any other Government contract in the past.

The information found herein is not intended to modify any existing contracts nor provide authorization to modify existing contracts.

If, after reading this information, you need further information you may contact the LI/SOC Quality Assurance office at (717) 605-7209 or the LI Program Management office at (717) 605-2809.

What is the LI/SOC Stock Program?

The LI/SOC programs are each a separate and distinct program but all are heavily focused on enhanced quality and engineering disciplines to assure material is of the required physical, mechanical and chemical compositions. The LI Program was implemented as a result of the tragic loss of the USS Thresher on April 10, 1963 with 129 Navy and civilian lives lost. Out of this tragic loss the Submarine Safety Requirements Program (SS) was instituted. The SS Program is a maintenance concept and program of certification to assure the safe operating condition of a submarine. The LI Program is a material control program to support the SS concept and program.

* LI is a material control program that establishes a material identification and control (MIC) program for those systems and associated components designated as Level I by the ship Class Level I Boundary Book and the Material Control Standard for LI material. Level I is the designation given to those systems and components for which the Navy requires a high degree of assurance that the chemical composition and mechanical properties of the installed materials meet the specified requirements. The Navy identifies LI material National Stock Numbers (NSN) with a suffix known as a Special Material

Identifier Code (SMIC) which can be found as a suffix to our NSNs. The Level I SMIC codes are: L1, C1, and S1.

- SOC and the Deep Submergence System. Those systems and components, which, when working together, provide the capability for manned underwater operations. Elements may include a manned vehicle, shore training facilities, designated support equipment, those systems that are a temporary or permanent part of a submarine that are used to disembark or recover personnel such as a Dry Deck Shelter (DDS) or Lockout Trunk, and handling equipment. SOC is the certification of those systems and components that are critical to the safe operation of Deep Submersibles. SOC NSNs are identified with a SMIC of D0, D4, D5, D6, D7, and D8.

Although the LI/SOC Stock Program is primarily a submarine program, certain systems on some surface ships are included:

- Main Steam Systems
- Steam catapult systems
- Oxygen generation systems

Program Overview:

Simply stated, LI material is only as good as the paper it is certified on. All LI material requires certifications that quantitatively and qualitatively describe the results of chemical and mechanical analysis and tests. Certifications and records are referred to as "objective quality evidence" or OQE.

With few exceptions, all LI/SOC material is procured with Defense Contracts Management Agency (DCMA) involvement. DCMA will perform in-plant surveillance of the quality system, procedures review and evaluation, special processes, as well as product verification. Rigorous conformance and compliance is the foundation of the Navy SUBSAFE Program. There is a reason we go to extremes to assure product compliance with requirements. Today's submarines and deep submersibles operate in an extremely hazardous and dangerous environment with no room for error. The most perfectly crafted part is worthless and will never be installed if the supporting OQE is in error, not accurate, or not in compliance with requirements. A submarine will never go to sea until all material documentation is reviewed and the installation inspected and audited to assure the correct material is used and installed.

Website Access Requirements:

Contractors doing business with NAVSUP WSS need access to the following e-business procurement and technical systems:

System for Award Management (SAM) - SAM is a federal government-wide procurement system that (1) acts as a single authoritative data source for vendor, contract award and reporting information. Vendors must be registered in SAM to receive a Government contract. See the following link for additional information - <https://www.sam.gov/portal/public/SAM/>

Online Representations and Certifications (ORCA) - ORCA is an application within SAM that enables prospective government contractors to electronically submit required certifications and representations for responses to government solicitations for all federal contracts, instead of using hard copies for individual awards. The representations and certifications can be considered current for up to one year. These representations and certifications include certifications of socioeconomic status, affirmative action compliance, and compliance with veterans' employment reporting requirements. Vendors must have current online representations and certifications in SAM to receive a NAVSUP WSS contract.

Wide Area Workflow (WAWF) - WAWF is a secure web based system for electronic invoicing, receipt, and acceptance. WAWF allows government vendors to submit and track invoices and receipt/acceptance documents over the web and allows government personnel to process those invoices in a real-time, paperless environment. Vendors must have access to WAWF to process a NAVSUP WSS contract. See the following link for additional information - <https://wawf.eb.mil/>

Electronic Document Access (EDA) - EDA provides vendors a "view-only" capability of contract documents that match their validated DUNS or CAGE codes. EDA can be accessed through WAWF.

Electronic Contractor Data Submission (ECDS) -The ECDS system is available for certain data submissions and to submit questions, ask for clarifications, and submit waivers and deviations on Contracts and Solicitations. This system can be found at: <https://nslcweb32.nslc.navy.mil/> This application will require a PKI Digital Certificate prior to registration and use. Information on initiating a PKI can be found at: <http://iase.disa.mil/pki/eca/index.html>

New Suppliers To NAVSUP WSS:

NAVSUP WSS Code N9712 relies heavily on the capabilities of industry. This makes it necessary that there be reasonable assurance that purchased supplies will perform their function, be delivered on time, in the quantity and quality required, and at a fair price. For these reasons, the LI Division performs a Pre-Award Survey on all potential suppliers to determine that contractors have the quality management systems, technical ability, production capacity, financial capability, material, machinery, and manpower to supply LI/SOC material. The Pre-Award Survey will be conducted by DCMA NSEO, NAVSUP WSS Quality Assurance Specialists, and possibly, engineers from NAVSEA. The pre-award survey process concludes with a recommendation to the LI Procurement Division regarding the prospective supplier's ability to fulfill all the terms of a LI contract. The following are some of the factors that are the focus of Pre-Award Surveys:

- Quality Assurance: Can you comply with the quality requirements invoked? A major portion of the Pre-Award Survey will be focused on this factor.
- Technical Capability: Do your key management personnel have the knowledge and experience needed to generate the required product or service?
- Production Capability: Do you have, or can you acquire, the facilities, material, equipment, and personnel needed to complete the contract on time? Can you plan, control, and integrate each of these? Do you have a system for timely placement of orders and for vendor follow-up and control?
- Finance: Do you have access to enough money to acquire needed facilities, material, equipment, and personnel?
- Government Property Control: Are you capable of managing and controlling government property?
- Packaging: Do you have the equipment and personnel to meet all of the packing and shipping requirements of the contract, such as marking, unitizing, and preservation?
- Security: Do you and your employees have up-to-date, adequate clearances? The Defense Security Service conducts such evaluations when required.
- Plant Safety: Can you comply with all federal, state, and local safety requirements?
- Other: Additional special requirements may be included in the contract.

Potential suppliers should ask themselves the following questions prior to a Pre-Award Survey.

- Have you chosen a management official to speak for your company?
- Is that management official totally familiar with the contract and the higher level quality requirements invoked?
- Does your quality system have adequate process controls, ensure material traceability, and properly segregate non-conforming material?
- Can you demonstrate your company's technical capability or the development of such a capability to generate the contracted product?
- Is your company's production plan adequate to meet the contract schedule? Is the plan available for review by the survey team?
- Are your plant facilities and equipment available and operable?
- Can your company meet the contract's packaging, packing, and preservation requirements, no matter how unusual?
- Do your company's employees have up-to-date security clearances, and are they cleared for the proper level of secrecy?
- Has your company hired enough properly skilled personnel?
- Does your company have documents - previous government or commercial contracts and orders - that demonstrate a satisfactory record of on-time deliveries of quality products?
- Have you made plans to escort the survey team through your facility? Are technical experts available to answer questions from the team?
- Have you gathered pertinent financial documents - a profit and loss summary, a balance sheet, a cash flow chart, and so forth?
- Do you have a list of on-hand tools and equipment? Is your measuring and test equipment properly calibrated?
- Have you made verifiable plans for vendor supplies and materials for subcontracts? Do you have a follow-up system to ensure that your company can meet the delivery schedule if a vendor has problems? Do your subcontractors have a quality system compliant with the contract requirements? Do you have quality

records available for the government to review upon request?

- Do you understand all the requirements for technical data and publications?
- Do you have any other information or data that the pre-award survey team would find useful?

Quality Assurance, Traceability, and Certifications:

Quality Systems:

All contracts issued by NAVSUP WSS for LI/SOC material will include FAR Clause 52.246-2 which requires suppliers to maintain a quality system acceptable to the government, and allows the DCMA NSEO QAR access to the contractor's facility for the purpose of inspection and product verification, commonly referred to as Government Source Inspection (GSI). When significant processes are sub-contracted to other facilities, GSI may need to be included in purchase orders or service agreements to permit government oversight and/or inspection at the sub-contractor facility. As a minimum, a quality system acceptable to the government for NAVSUP WSS LI/SOC contracts includes documented procedures for product verification, including calibration records for inspection equipment and records associated with product verification, documented review of sub-tier supplier capability and a documented process for managing non-conforming material. NAVSUP WSS will request DCMA conduct a pre-award survey to verify quality system acceptability. *See below for additional information on Pre-Award Surveys.*

Code N9712 will always require a higher level quality program or inspection system in our contracts due to specific program requirements. The following may apply:

- International Organization for Standardization -- ISO 9000 Quality Management Series
ISO standards outlines principals and guidance for implementing a quality system which assures products consistently meet customer requirements. When a higher level contract quality requirement is invoked, NAVSUP WSS contracts will include Supplemental Technical Requirements (STR) which augment the ISO standards by adding additional requirements which must be observed for our orders. Certification to ISO standards by a third party is not required for NAVSUP

WSS contracts. Companies who do not have manuals consistent with ISO principals may elect to follow MIL-I-45208 or MIL-Q-9858.

- MIL-I-45208
This military specification, though canceled, establishes requirements for the inspection system and tests used to substantiate product conformance. Like ISO, it outlines requirements for documentation, records and process controls with the intent of ensuring product meets customer requirements.
- ISR-1
This document supplements MIL-I-45208 by adding additional requirements for the qualification of inspection and test personnel, inspection system audits, Identity of records and recorded characteristics.
- MIL-Q-9858
This military specification requires the establishment of a quality program to assure adequate quality throughout all areas of contract performance such as design, development, fabrication, processing, assembly, inspection, test maintenance, packaging, shipping, storage and site installation.
- QRC-82
This document supplements MIL-Q-9858 by adding additional requirements for the qualification of inspection and test personnel, inspection system audits, Identity of records and recorded characteristics.
- IQE-1
Integrated Quality Engineering Specification establishes specific requirements for Naval LI/SOC products, including control of critical product characteristics throughout the planning and manufacture of the product.
- MIL-DTL-45662
This military specification outlines the requirements for maintaining a calibration system to monitor the equipment utilized for product inspection. Typically companies have the option to follow ISO 10012.

Traceability:

To assure that correct materials are installed in LI/SOC systems, it is imperative that traceability be maintained from the material to the material certification test reports and other required Objective Quality Evidence (OQE). The material certification report must completely and accurately reflect that the material supplied meets the specified requirements.

Materials requiring traceability and certification data are identified within part I section C (Description/Specifications/Work Statement) paragraph 3 of NAVICP LI/SS contracts. Quality Assurance, Traceability, certification and material control requirements are identified within part I section E, (Inspection and Acceptance) of the contract.

The following provides some general requirements for maintaining LI/SOC material traceability and control and certifications in accordance with Data Item Description (DID) DI-MISC-81020 (Certification Data for Non-Nuclear Level I Material):

- Written procedures must be developed that implement the LI/ SS material control requirements specified in the contract.
- Material traceability codes must be permanently applied to the material and annotated on test reports for each Individual Heat/Heat Lot of material supplied. Where Heat Traceability is not possible due to manufacturing processes (e.g., continuous pour operations), lot traceability must be provided as defined in the applicable material specification and when applicable, as further defined in the contract/purchase order.
- Traceability marking must either be Heat/Lot number, a unique contractor traceability code, or a combination thereof to maintain complete traceability to original mill certification.
- Traceability must be maintained through all process operations including any subcontracted operations, to the finished component.
- For material produced by batch, continuous cast, or continuous pour processes; samples shall be taken no

less than once in every eight hours of operation for the purpose of validating proper chemical composition and mechanical properties.

Certifications:

In addition to the certification data requirements of DI- MISC-81020, the following material certification requirements apply:

Quantitative chemical and mechanical analysis of material traceable to Heat identification is required.

Material certification test reports must include the class, form, condition, grade, type, finish, and/or composition, as applicable, of the material supplied.

Re-identification and re-certification of material is required when the material is subjected to a process which alters its properties.

If the starting material or raw stock is processed in a manner that will not affect its chemical composition or mechanical properties, the original certifications for the chemical composition and mechanical properties, as required by the material specification, are acceptable.

Re-certification of the chemical or mechanical properties is required if a process is used during fabrication that alters the original properties of the material (e.g. alloying, Heat Treating or forming). In these instances, the properties of the material must be re-determined and documented to reflect the altered condition. The altered material must be uniquely re-identified. The properties thus determined and documented, are required for final certification and must conform to the material specification or contract requirements.

When only the mechanical properties are altered, the original certification for chemical composition must be annotated with the unique traceability marking used with the altered material.

DCMA Contract Administration:

Defense Contract Management Agency Navy Special Emphasis

Operations (DCMA NSEO)

DCMA NSEO provides contract administration services, production surveillance and quality assurance within the manufacturing community for NAVSUP WSS LI/SOC contracts. They act as a frontline interface between the government and contractors to ensure that purchased supplies will be delivered on time and in the quality and quantity required.

DCMA NSEO Quality Assurance Representative (QAR)

Quality Assurance Representatives are defined as a government assigned on-site program coordinators acting as a liaison between the contractor personnel and the government. The responsibilities and duties of the QAR are dependent upon the contract requirements invoked; therefore the QAR must have a complete understanding of each contract and statement of work. Following are some of the responsibilities of the DCMA NSEO QAR:

Post-Award Orientation Conference

The QAR conducts a post-award orientation conference on each NAVSUP WSS LI/SOC contract to aid both the government and contractor personnel in achieving a clear and mutual understanding of all the contract requirements invoked. The purpose of the meeting is to have a detailed discussion up front in order to reduce the number of contract performance issues that delay material delivery. At a minimum the post-award conference should include a discussion on any subcontractor flow down requirements, applicable drawings, design data, manuals, specifications, pre-production requirements, qualification tests, specification interpretation, packaging and marking requirements, NOFORN compliance, and contract data deliverables. The QAR should also notify the supplier in writing of any required hold points in the production or manufacturing process; hold points allow the government to witness any important manufacturing processes, an opportunity to verify significant material characteristics, or address any special areas of concern.

Product Quality Deficiency Reports (PQDRs)

PQDRs are the primary tool used for receiving feedback from material users on the state of systems and material issued through the supply system. The primary purposes of PQDRs are to report material non-conformances, provide a vehicle to recover material cost as a result of the non-conformance, and to take steps to prevent recurrence. Non-conformance

deficiencies are any defect, condition, or premature equipment failure indicating deficiencies in design, specification, documentation, material, manufacturing, and workmanship.

PQDRs are classified as CATEGORY I or CATEGORY II. CATEGORY I include critical defects which may cause death, injury, severe illness, loss or major damage to a weapon system, and ultimately restrict combat readiness capabilities. CATEGORY II includes any major or minor defect which does not meet the criteria set forth in Category I.

In the event of a PQDR, the contractor will be expected to assist in the investigation to determine the root cause of any valid deficiencies; root cause is defined as what processes failed to allow the deficiency. Next contractors will be expected to develop and execute valid corrective actions to resolve any valid deficiencies; corrective actions are defined as what the contractor and QAR are doing to correct the deficiency for this shipment. Then contractors will develop preventative actions to preclude recurrence of deficiencies; preventative actions are defined as what the contractor and QAR are doing to ensure the deficiency doesn't happen again. Finally, the contractor is expected to keep the DCMA NSEO QAR informed of the status of the investigation and any rework, repair, or replacement of nonconforming material.

Corrective Action Requests (CARs)

FAR 46.105(a) states that the contractor is responsible for carrying out its obligations under the contract by (1) controlling the quality of supplies, and (2) tendering to the Government for acceptance only those supplies that conform to the contract requirements.

FAR 46.106 states that when a contract is assigned for administration to the contract administration office cognizant of the contractor's plant, that office, unless specified otherwise, shall perform all actions necessary to verify whether the supplies or services conform to the contract quality requirements.

DCMA NSEO has a policy that when nonconformities associated with a supplier's Quality Management System (QMS), processes or product characteristics are independently discovered by DCMA, the supplier shall be notified and requested to initiate corrective actions in accordance with the contract requirements. Product or process nonconformities may be evidence of a breakdown in the supplier's QMS or inspection systems.

There are four levels of Corrective Action Requests (CARs) that depend on the severity of the nonconformity, and the level of supplier management visibility required to adequately address corrective actions. CARs can be issued by any DCMA NSEO functional specialist to include the QAR, Industrial Specialist (IS), and the Administrative Contracting Officer (ACO).

Level I CARs are issued to the supplier management level responsible for taking corrective actions for a nonconformity that can be corrected on the spot, and where no further corrective action response is necessary.

Level II CARs are the minimum level for a nonconformity associated with critical characteristics. They are issued to the supplier management level responsible for initiating corrective actions when the contractual nonconformity cannot be corrected on the spot. Level II CARs may be issued to subcontractors, and may be coupled with contractual remedies such as charge for additional cost of inspection or test when prior rejection makes re-inspection or re-test necessary. The purpose of a Level II CAR is to help a supplier improve their QMS.

Level III CARs are issued to the supplier's top management for serious contractual nonconformities, failure to respond to a Level II CAR that has been issued, and repeat Level II CARs which indicates inadequate root cause determinations. Level III CARs are issued by the DCMA NSEO ACO and may be coupled with contractual remedies to include reduction of progress payments, cost disallowances, business management systems disapprovals, and charge for additional cost of inspection or test when prior

rejection makes re-inspection or retest necessary. A Level III CAR is the DCMA NSEO Commander's management tool to correct issues that need to be addressed.

Level IV CARs are issued to the supplier's top management when a Level III CAR has been ineffective and when the contractual nonconformity is of a serious nature. Level IV CARs are issued by the DCMA NSEO ACO and may be coupled with contractual remedies to include suspension of progress payments, suspension of product acceptance activities, removal of QAR from facility, and charge for additional cost of inspection or test when prior rejection makes re-inspection or retest necessary.

The supplier's response to the CAR should (1) identify the causes of the nonconformity to include the root cause(s) and casual factors; (2) state the actions taken to correct the specific nonconformity; (3) state the actions taken or planned to eliminate the cause(s) and prevent recurrence of the nonconformity; (4) state whether other products are affected, including product already delivered to the customer; (5) state action taken to correct the weakness which allowed deficient product to be presented to the government for acceptance; and (6) state the target date(s) for implementation of planned actions.

DCMA NSEO will review the supplier's corrective action response; verify implementation of the corrective action, and follow-up to validate the effectiveness of the corrective action. If the supplier's corrective action is ineffective, then the corrective action request is resubmitted to the supplier. If the supplier's corrective action is effective then the CAR is closed. The overall objective of the CAR process is to reduce the number of PQDRs.

How Do Distributors and Dealers Comply?

As a distributor/dealer who does not actually manufacture material, you are equally responsible for:

- Ensuring that the product meets all contractual requirements,

- Ensuring that the product is manufactured in accordance with the applicable quality requirements, and
- Ensuring that all the necessary certifications are provided.

The nature of a distributor/dealer business may not lend itself to a complete ISO 9000 Series/MIL-I-45208A Quality/Inspection system. However, as a minimum, you would be required to have a documented system that would be comprised of, but not limited to, the following requirements:

- Convey all requirements of the contract to the subcontractor.
- Include requirements for control of the subcontractor to ensure that the subcontractor has implemented a Quality/Inspection system in accordance with ISO9000 series/MIL-I-45208.
- Corrective action requirements for discrepancies.
- Maintenance and control of records.
- Drawing control when drawings are furnished to the subcontractor.

A distributor may choose from four types of operating modes for NAVSUP WSS LI Stock Program Contracts. The contractors Inspection/Quality System manual must clearly detail which method they intend to use and precisely how they will operate under each.

(1) Item shipped directly from manufacturer/supplier to the Government, with GSI performed at the manufacturer/supplier facility and Final Acceptance at the RIA, Portsmouth Naval Shipyard, Portsmouth NH.

(2) Item shipped to prime contractor's facility after GSI performed at actual manufacturer/supplier, final acceptance at prime contractor (e.g., documentation, packaging) then shipped to Government (no work performed).

(3) Item shipped to prime contractor's facility, work performed on the material, subject to GSI, and then shipped to the government.

(4) Item shipped to prime contractor's facility, inspected, warehoused, subject to GSI, and then shipped to the Government.

What Does This Mean To You?

If you have, or can develop, the capability for supplying a high quality product in accordance with the general requirements outlined herein, as well as complying with the certification criteria, there may be an opportunity for you to expand your business volume through the NAVICP LI/SOC Stock Program. If you are interested, we would like to discuss the opportunity with you.

Other Things You Should Know

Configuration Control

Configuration Control is strictly maintained as specified in the contract. The contractor must submit all Engineering Change Proposals, Requests for Waivers/Deviations in accordance with the contract. Our Program forbids acceptance of any nonconformance by DCMA. All requests must come to NAVSUP-WSS for review and approval or rejection.

Mercury Free

The material supplied under LI/SOC Procurement documents is intended for use in submarines and surface ships and therefore must contain no metallic mercury and must be free from mercury contamination. Mercury contamination of the material will be cause for rejection.

If the inclusion of metallic mercury is required as a functional part of the material to be furnished under a LI/SS contract, the contractor must obtain written approval from the PCO before proceeding with manufacture. The contractor request must explain in detail the requirements for mercury, identify specifically the parts to contain mercury, and explain the method of protecting against mercury escape.

Such a request will be forwarded directly to the PCO with a copy to the QAR. Upon approval by the PCO, the

contractor will provide a "Warning Plate" stating that metallic mercury is a functional part of the item and will include the name and location of that part.

The use of mercury, mercury compounds, or mercury-bearing instruments and/or equipment in a manner that might cause contamination in the manufacture, assembly, or test of material on a LI/SS contract is prohibited.

The most probable causes of contamination are direct connected manometers, mercury vacuum pumps, mercury seals, or the handling of mercury in the immediate vicinity. Mercury switches, mercury in glass thermometers, standard cells and other items containing mercury may be used if they are located so as not to constitute a contamination hazard.

These requirements must be included in any subcontract or purchase order and the contractor must ensure subcontractor compliance with these requirements.

Technical questions pertaining to these requirements must be referred to the Procurement Contracting Officer via the Administrative Contracting Officer.

For information, the following is provided:

- Mercury is corrosive to gold, silver, nickel, stainless steels, aluminum and copper alloys.
- Stainless steels, nickel, and copper alloys are widely used in reactor plants and other submarine/surface ship systems.
- Accidental trapping of mercury in a component could cause serious damage to vital parts.
- Mercury is also toxic if inhaled, ingested, or absorbed through the skin.
- It is evident that grave consequences could result from small amounts of mercury vapor present in a un-replenished submarine/surface ship atmosphere.

Receipt Inspection:

All LI and SOC material procured will **always** be shipped to PNS for receipt inspection before it can be issued as "useable" material to the Fleet. During the receipt inspection the material will be examined in accordance with the LI Material Control Standard. This inspection will not exceed the contract requirements. Assemblies will not be disassembled. Hardness testing and some basic alloy identity testing will be conducted as well as some nondestructive testing on certain commodities such as bar stock and pipe. If the material is found acceptable the Material Identification Control mark will be applied by the shipyard at this time and the material issued for use or placed in stock. Always remember; you the supplier will **never** ship any material anywhere except PNS for receipt inspection. LI and SOC material cannot be installed until it has been accepted and MIC marked by PNS.