



DEPARTMENT OF THE NAVY  
NAVAL SEA SYSTEMS COMMAND  
WASHINGTON, D.C. 20362-5101

IN REPLY REFER TO

NAVSEAINST 9096.5B  
OPR 55W2  
7 Dec 1987 -

NAVSEA INSTRUCTION 9096.5B

From: Commander, Naval Sea Systems Command

Subj: WEIGHT CONTROL RESPONSIBILITIES DURING DETAIL DESIGN AND  
CONSTRUCTION

Encl: (1) Amplifying Instructions for Execution of  
Responsibilities  
(2) Amplifying Instructions for Implementing the AWE  
policy (A)

1. Purpose

a. To reaffirm Command policy and direction concerning weight control and insure vigorous enforcement of program responsibilities through management inspection, reviews, and technical evaluations.

b. To incorporate recent policy changes concerning Accepted Weight Estimates (AWE) and amplify instructions for implementing AWE policy.

c. To incorporate recommendations of the Weight Control Task Force, FFG 7 Class Senior Navy Steering Board, and the Chief of Naval Operations Executive Board (CV41).

2. Cancellation. NAVSEAINST 9096.5A of 21 November 1983. (\*

3. Applicability. This instruction applies to the acquisition, conversion, or major modernization (e.g. a modernization for which a Circular of Requirements or a ship specification is developed) of all commissioned ships and craft managed by NAVSEA, as well as ships acquired by NAVSEA for other organizations (such as Military Sealift Command). It also applies to overhauls on a case basis, as designated by SEA 05, where a major impact on the weights and moments of an in-service Navy ship is anticipated. (R

4. Definitions

a. Weight Control. Weight control is all the actions necessary (e.g., predicting, estimating, calculating, reporting, analyzing, evaluating, and reversing adverse trends) to ensure that a ship's weights and moments are consistent with its naval architectural limits for displacement, strength, stability, list, trim, and performance (such as speed, endurance, and seakeeping). (\*

b. Weight Reporting. Weight reporting is that part of weight control which constitutes the technical presentation of the most current weights and moments at periodic times throughout the detail design and construction process.

## 5. Background

R) a. Many naval architectural characteristics, performance requirements, and survivability features of a ship are dependent on its weights and moments. Weights are also very critical to the ship cost estimating process. It is vitally important that these weights and moments be monitored and controlled during detail design and construction. Weight control is achieved through both contractual and technical mechanisms.

\* b. The present program for weight control was established in the early 1960s after several ships were completed overweight and with gross deficiencies in list, trim, and stability. More recently, undesirable situations involving displacement and stability have surfaced late in the ship construction phase. This has served as a reminder that aggressive weight control is still required. This instruction clarifies, reinforces, and supplements previous directives.

## 6. Policy

\* a. It is the policy of NAVSEA that the weights and moments of ships undergoing detail design and construction for new shipbuilding, conversion or major modernization will be controlled to prevent unacceptable deterioration of the naval architectural and performance characteristics of the ship.

A) (1) For those ship acquisitions which result from Navy controlled contract designs, the hull geometry, installed propulsion, and combat systems will be specified in the solicitation package. In these cases Not-to-Exceed (NTE) displacement and vertical center of gravity (KG) values will be specified in a contract clause. Also a liquidated damages clause should be included in the contract under Federal Acquisition Regulation (FAR) 12.202 to establish the level of compensation due to the Navy should the NTE values be surpassed. The mechanism that demonstrates the bidder's ability to achieve the NTE values will be a solicitation requirement to submit an independent weight estimate with the solicitation response.

A) (2) For ships acquired using performance-type specifications (e.g., speed, endurance, payload, etc.) the required service life allowances will also be specified. Instead of an AWE an Allocated Baseline Weight Estimate (ABWE) will be generated by the appropriate shipbuilders and submitted with the hull and propulsion configurations for approval by NAVSEA. The ABWE must satisfactorily show that the ship as proposed will meet specified performance and be delivered with specified service

life allowances. Weight estimating and control requirements shall be included in the procurement specification. Submittal and approval dates for the ABWE shall be specified in the pertinent Contract Data Requirements List (CDRL) line item to coincide with submittal of the hull and propulsion configurations. A liquidated damages clause shall be included in the contract. The increments of weight and/or KG for which damages are imposed should relate to percentage ranges of service life allowance lost.

7. Responsibilities and Action. Amplifying instructions and implementation procedures are provided in enclosures (1) and (2), (\* respectively. Program actions are assigned as follows:

a. The Deputy Commander for Ship Design and Engineering (SEA 05)

(1) Coordinate the overall weight control program and provide technical direction.

(2) Establish procedures necessary to accomplish weight control.

(3) Maintain surveillance over the program through inspections, reviews, and technical evaluations and recommend appropriate enforcement or corrective actions.

(4) Conduct periodic weight control training for all headquarters and field activities personnel involved in weight control, including a regularly scheduled weight and stability symposium.

(5) Designate a principal coordinator for weight control matters.

(6) Include weight control requirements in Government Furnished Material (GFM) related instructions and procurement documents.

(7) Ensure that changes to hull, mechanical and electrical (HM&E) equipment which have weight and/or moment impact are properly staffed through Configuration Control Boards. (A

b. The Deputy Commander for Combat Systems (SEA 06)

(1) Designate a combat systems coordinator for weight control matters.

(2) Include weight control requirements in GFM related instructions and procurement documents.

(3) Nominate personnel to attend the regularly scheduled weight and stability symposium and ensure their participation. (A

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A) (4) Ensure that changes to combat system equipment which have weight and/or moment impact are properly staffed through Configuration Control Boards.

R) c. The Platform Directorates (SEA 91, SEA 92, and SEA 93)

(1) Ensure that newly appointed Program Managers and other appropriate subordinate personnel attend a weight control training course conducted by SEA 05.

(2) Nominate personnel to attend the regularly scheduled weight and stability symposium and ensure their participation.

A) d. The Program Offices

(1) Include appropriate weight control requirements and procedures in all ship acquisition, conversion, or modernization solicitations.

(2) Ensure procedural compliance by contractors.

(3) Maintain weight control of configuration change requests (Engineering Change Proposals (ECPs), deviations, and waivers).

(4) Institute appropriate contractual incentives for weight and KG control for all future shipbuilding contracts.

R) e. The Principal Deputy Commander for Acquisition (SEA 90) shall review and maintain instructions governing ECP preparation to ensure inclusion of appropriate weight control requirements.

A) f. The Deputy Commander/Comptroller (SEA 01) shall nominate personnel to attend the regularly scheduled weight and stability symposium and ensure their participation.

\* g. The Deputy Commander for Contracts (SEA 02) shall provide the necessary support to SEA 05 to assure that weight control requirements incorporated into standard contractual documents are contractually sound and enforceable, particularly those dealing with corrective action, contract modifications and provisions for liquidated damages and incentives.

h. The Deputy Commander for Industrial and Facility Management (SEA 07)

(1) Ensure that field activity standing instructions include current weight control requirements and responsibilities.

A) (2) Nominate personnel to attend the regularly scheduled weight and stability symposium and ensure their participation.

i. The Deputy Commander for Nuclear Propulsion (SEA 08) shall ensure that instructions for weight control of pertinent nuclear propulsion material are consistent with the policies of this instruction.



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SEA 55W2 (100)  
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AMPLIFYING INSTRUCTIONS FOR EXECUTION OF RESPONSIBILITIES

1. SEA 05

a. Coordinate the principal weight control program and provide technical direction by designating a specific individual within SEA 05 as the principal coordinator for the weight control program. This person is responsible for developing procedures and providing such guidance as is necessary to achieve and maintain an efficient and practical weight control program consistent with the policies set forth in this instruction. The principal coordinator will also:

(1) Conduct continuing research of the weight engineering field for new technical aspects and weight control concepts to attain a more effective program from both technical and cost aspects.

(2) Sustain an educational campaign to raise or maintain weight control consciousness in personnel involved in ship acquisition, conversion, or modernization. This will be a coordinated effort among SEA 05, SEA 06, SEA 07, and the Platform Directorates. (R)

b. Establish procedures necessary to accomplish weight control by:

(1) Developing, with the support of SEA 02, standard contractual weight control language and instituting appropriate contractual incentives for control of weight and KG. (\*)

(2) Providing weight control requirements to the Program Offices for each ship acquisition. (\*)

(3) Providing quarterly performance indicators to the Platform Directorates, Program Offices, and Ship Logistic Managers for each ship acquisition during detail design and construction. (A)

(4) Establishing and maintaining monitoring procedures to provide assurance that values agreed upon for a ship's displacement, KG, list, or trim are not compromised and that estimates and reports reflect current design or construction status.

(5) Establishing and maintaining an effective weight control program for GFM. This will be a coordinated effort among SEA 05, SEA 06, and the Platform Directorates.

(6) Reviewing and recording weight and moment data included in ship configuration change requests, and subsequent approved contract modifications, for comparison with weight and KG margins established for each ship acquisition program. Take appropriate actions necessary to prevent compromise. (\*)

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R) (7) Preparing a directive from NAVSEA to other Commands and designated Project Managers, establishing requirements for control of weights and moments for shipboard material they procure or furnish.

A) (8) Informing the cognizant Program Office, with a copy to the Platform Directorate, when a ship's limiting KG or displacement threshold is approached with recommendations for corrective action.

c. Maintain surveillance over the weight control program by:

(1) Conducting a continuing review of the General Specifications, military standards, standard contract requirements and related documents that are, or should be, pertinent to the program.

\*) (2) Reviewing contractor's demonstrated performance against committed or promised actions, such as those put forth in Weight Control Plans and Design Reviews.

\*) (3) Following through on all recommendations for remedial actions to assure intended objectives are met.

(4) Providing assistance to SEA 00N for administrative inspection of weight control procedures at selected field activities.

\*) d. Conduct weight control training for all headquarters and field activities personnel involved in weight control by:

\*) (1) Maintaining and presenting a weight control training course incorporating current policy and requirements to ensure that newly appointed program managers, deputy program managers, assistant program managers, program engineers, ship design managers, and task group managers are educated in the aims of the Navy weight control program.

A) (2) Conducting a regularly scheduled weight and stability symposium involving NAVSEA, TYCOMs, SUPSHIPS, NAVSHIPYDs, and planning yards to discuss problems, exchange ideas and propose solutions.

(3) Coordinating training announcements and scheduling with SEA 90.

e. Designate a machinery weight control coordinator for weight control matters within SEA 05 to:

\*) (1) Serve as a point of contact for machinery weight control matters.

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(2) Participate in establishing and maintaining the weight control program for GFM procured by the Directorate or under its control.

(3) Review the Directorate's role in ship machinery design to assure that the policies contained in this instruction are embodied in procedures and practices.

(4) Ensure that changes to HM&E equipment which have weight and/or moment impact are properly staffed through Configuration Control Boards. (A)

f. Include weight control requirements in GFM-related instructions and procurement documents. These requirements are:

(1) Including a requirement that estimated weight and KG be submitted by the offers in solicitations for units of equipment with weights of 100 pounds (50 kilograms) or more. (R)

(2) Delivery within estimated weight shall be one of the technical considerations in performance of all such contracts.

(3) Furnishing accurate reports of actual weight and center of gravity information to the Government by GFM contractors per data submittal requirements specified in acquisition documents. (\*)

(4) Providing shipbuilders with weight information for GFM as an element of Government Furnished Information (GFI). (\*)

## 2. SEA 06

a. Designate a combat systems weight control coordinator for weight control matters within the Directorate to:

(1) Serve as the point of contact for combat systems weight control matters that concern the Directorate.

(2) Participate in establishing and maintaining the weight control program for GFM procured by the Directorate or under its control.

(3) Review the Directorate's role in ship combat systems design to assure that the policies contained in this instruction are embodied in procedures and practices.

(4) Ensure that changes to HM&E equipment which have weight and/or moment impact are properly staffed through Configuration Control Boards. (A)

b. Include weight control requirements in GFM-related instructions and procurement documents. These requirements consist of:

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- R) (1) A requirement that estimated weight and KG be submitted by the bidders in solicitation for units of equipment with weights of 100 pounds (50 kilograms) or more.
- (2) Delivery within estimated weight shall be one of the technical considerations in performance of all such contracts.
- (3) Furnishing accurate reports of actual weight and KG
- \* information to the Government by GFM contractors per data submittal requirements specified in acquisition documents.
- (4) Providing shipbuilders with weight information for
- \* GFM as an element of GFI.
- A) c. Nominate personnel to attend the regularly scheduled weight and stability symposium and ensure their participation.

R) 3. Platform Directorates

a. Ensure that newly appointed program managers, deputy program managers, assistant program managers, and program engineers attend the SEA 05 weight control training course within the first year in the position.

b. Nominate personnel to attend the regularly scheduled weight and stability symposium and ensure their participation.

A) 4. Program Offices

a. Include the following weight control requirements and procedures in all ship acquisition, conversion or modernization solicitations:

(1) Weight control and reporting requirements developed by SEA 05 in ship specifications for each ship acquisition.

(2) Contract terms and conditions for effective weight control for ship contracts to insure that shipbuilders are held accountable for delivery of satisfactory ships with regard to contractually imposed constraints on displacement, KG, list, and trim.

(3) Provisions in contractual requirements to require independent weight estimates prior to negotiating an Accepted Weight Estimate and independent weight impact assessments during the scoping process for contract modifications. To ensure independence, deny access to any Government developed weight data that might compromise the impartiality of the estimates and assessments.

(4) Institute appropriate contractual incentives for weight and KG control for all future shipbuilding contracts.

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(5) Weight and moment information and stability requirements in Contract Modification adjudication to retain weight and moment accountability.

b. Approve configuration change requests only after-prior review and recording by SEA 05 as evidenced by the signature of the Head, Weight Division (SEA 55W2) on the configuration change request. Where an ECP is processed on an emergency basis, a conditional oral notification to the Weight Division (SEA 55W2) may be made. If approved by the Configuration Control Board, a copy of the ECP shall be sent to the Weight Division, after the fact, to receive a confirming signature.

c. Ensure procedural compliance by contractors by:

(1) Treating contractual naval architectural requirements specified in ship specifications in the same manner as other vital technical requirements. Failure to meet contractual naval architectural requirements will require submittal of a deficiency card to the Board of Inspection and Survey Board (INSURV).

(2) Advising SEA 00 when limiting KG and displacement thresholds are approached based on performance indicators provided by SEA 05 and developing alternatives to reverse adverse trends.

(3) Drafting correspondence for SEA 00 signature advising OPNAV of ships projected to exceed their limiting KG and displacement thresholds.

(4) Drafting correspondence for the Contracting Officer advising the contractor that the adverse situation must be corrected.

(5) Taking prompt action as indicated by the specific circumstances to obtain appropriate retribution from contractors for any delinquency in weight control actions.

(6) Inspecting the completed ship to determine that it meets contractual naval architectural requirements and, where necessary, obtaining corrective action or liquidated damages from the contractor.

d. Provide all necessary weight and stability information (e.g., inclining experiment, weight reservations, and the final weight report) for each ship as part of the information passed to the life cycle manager when management responsibility passes from the acquisition manager.

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- R) 5. The Principal Deputy Commander for Acquisition (SEA 90)  
Review instructions governing configuration change request preparation for inclusion of appropriate weight control requirements. Ensure that ECP preparation instructions include the requirement that all originators of ship ECPs prepare and include an estimate of the net weight and moment effect (numerical values) of the ECP. The values, including "no weight and moment" changes, shall be shown as part of the description of the ECP. Reference to, and inclusion of, backup detail calculations shall be required for complex or significant changes in weight and moment (e.g., new weapons installation or rearrangement of electronic spaces). The net weight and moment change shall take into account not only all material added or removed directly, but also all secondary effects necessary to accomplish the change (e.g., structural modifications, foundations, compartmentation, load items, etc.).

6. SEA 07

a. Ensure that field activity standing instructions include current weight control requirements and responsibilities. The Ship Acquisition Contract Administration Manual (SACAM) shall embody the following requirements for the Supervisor or Shipyard Commander (shipyard regulations should cover the same requirements in the context of direct shipyard involvement in a weight control program):

- (1) Visit the NAVSEA Weight Division (SEA 55W2) within  
\*) 30 days after award of contract to discuss:
- (a) The amount of detail necessary in the contractor's weight estimates.
  - (b) Problem areas experienced in arriving at the NAVSEA weight estimate.
  - (c) General considerations in weight and moment classification.
  - A) (d) Method of routing correspondence between contractors and Government activities for all weight control reporting matters.
- (2) Establish an operating educational program to stress the importance of weight control and periodically present the  
\*) NAVSEA view to personnel at all levels, including personnel of Ship's Forces.
- (3) Exercise strict surveillance over contractors' farm-out operations to ensure that all contracts are explicit with respect to weight control requirements, and that the subcontractor's weight control staff is adequate to comply with the requirements.

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(4) Strictly enforce specified timeliness and format requirements for weight estimates and reports.

(5) Check the validity of factors used in the determination of such weight and moment data as welding, painting, and mill tolerances.

(6) Transmit promptly to NAVSEA or to the contractor, as appropriate, all weight and moment information, including curves of form, design limits, ship and contract modification estimates, and reports.

(7) Communicate to NAVSEA, without delay, questions that may arise on such matters as weight and moment classification, intent of the specifications, and contract enforcement.

(8) Issue no field modifications that would cause the ship displacement or height of the center of gravity to exceed any limiting values for speed, strength, trim, list, or stability. Include in every field modification the net weight and moment effect of the change.

(9) Review each NAVSEA-initiated change with the contractor to ensure that estimated weight and moment values are included and reasonably accurate. If not, action will be taken to advise NAVSEA of weight and moment changes calculated by the cognizant office. The change shall not be issued without NAVSEA approval if review indicates any possibility of adversely affecting overall displacement or stability.

(10) Ensure that newly appointed field activity weight control coordinators receive training conducted by NAVSEA (SEA 55W2). The training will address current weight control program policy, procedures, and requirements. This training will be scheduled within the first year of appointment to the weight control coordinator position. (A

b. Nominate personnel to attend the regularly scheduled weight and stability symposium and ensure their participation. (A

(1) All field activity weight control coordinators shall attend the symposium.

(2) Ensure the nomination of responsible individuals who are qualified to exchange ideas and discuss problems related to ship weight and stability. The nominees should include the Chief Design Engineer, a quality assurance representative, a contract representative for the private sector, and a type desk representative for the public sector from each field activity.

AMPLIFYING INSTRUCTIONS FOR IMPLEMENTING THE AWE POLICY

(A)

1. Background. Since 1962 the Navy and shipbuilding contractors have agreed on weight estimates for ships well after the contract award but usually by the beginning of construction. The intent was that the agreement be based on the design documentation at the time of contract award and an independent contractor estimate of ship weight. This approach was intended to cross-check the Navy estimate by having the contractor develop an independent estimate and then mutually negotiate the AWE values for displacement and vertical center of gravity (KG). Some numbers of ships subsequently suffered severe weight and KG growth during construction. Among the many factors contributing to the growth were a lack of a truly independent contractor weight estimate and delays in arriving at a signed AWE. Several reviews and studies have determined that changes in this approach were needed in order to better assure that Navy ships are delivered with adequate service life allowances.

2. Objectives. The objectives of the weight control program policy of paragraph 6. of this Instruction are as follows:

- a. Delivery of ships with adequate service life allowances
- b. Validation of designs before contract award
- c. Early warning of major design problems
- d. More accurate contractual values, and
- e. More timely Accepted Weight Estimates

3. Solicitation/Contract Award Process and Responsibilities. This Instruction describes two distinct types of acquisition strategies which may be used by the Navy:

- I. Navy controlled contract designs
- II. Performance-type specifications

a. Ship procurements that result from Navy controlled contract designs will require solicitation responses from shipbuilding contractors to develop the detail design and construct a ship based on a set of ship specifications and contract drawings. NAVSEA will develop Not-to-Exceed (NTE) values for displacement and KG based on the Contract Design Weight Estimate, the naval architectural limits, the desired service life allowances, and unique program considerations. The values will be specified in the Special Requirements section of the contract. The purpose of the NTE strategy is to achieve an AWE that predicts a ship at delivery with proper service life growth capabilities.

(1) The Program Offices shall ensure that the solicitation package includes the following weight control program elements:

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- o Weight Control Contract Clause
  - NTE values specified for AWE
  - Liquidated damages (when appropriate)
- o Incentives for weight and KG control -
- o Proposal Submittal Requirements
  - Bidder's Independent Weight Estimate (BIWE)
  - Preliminary Weight Control Plan (PWCP)
  - Resumes for personnel with weight control responsibilities
- o Attachments
  - Factors for determining loads
  - Weights for Government Furnished Material (GFM)
- o Specification Sections
  - 096 Weight control/reporting requirements
  - 070 Limits for displacement, KG, list, and trim
- o Contract Data Requirements
  - Appropriate deliverables package

(2) Each responding shipbuilder shall be required to submit the following:

(a) A BIWE which establishes the potential contractor's estimate of the ship(s) at the time of contract award. It is based on the Specifications, all of the documents referenced therein, and the factors for determining loads that comprise the solicitation package. The BIWE shall consist of the bidder's estimate for the Light Ship (condition A), Full Load (condition D), and Capacity Load (condition E) conditions. Definitions for these loading conditions are provided in DOD-STD-2137(SH). In addition to the reporting requirements of DOD-STD-2137(SH), values for the following characteristics shall be computed for each condition: trim, list, drafts, and metacentric height, uncorrected and corrected for free surface. The BIWE shall contain estimated values for detail design and building margin. The technical analysis that substantiates the margin values shall be included as Appendix (A) to the weight estimate. Factors and values for determining variable loads and weights for Schedule "A" (GFM) are provided as an Attachment in the contract package. The variable load shall be distributed realistically throughout the ship in appropriate spaces. A separate report of GFM weight data compiled in accordance with DOD-STD-2137(SH) shall be included in Appendix (B). Items shall be grouped using the first three digits of the numbering system as defined in NAVSEA EXPANDED SHIP WORK BREAKDOWN STRUCTURE (ESWBS), (NAVSEA S9040-AA-IDX-010/SWBS 5D and Appendix A of NAVSEA S9040-AA-IDX-020/SWBS 5D). The BIWE shall contain details for each three-digit element. An example of the level of sufficient

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detail will be provided at the shipbuilder's request. When the contract is awarded, the successful offerer's BIWE will become the basis for the AWE. The NTE displacement and KG values defined in the Contract Clause are based on the Navy's Contract Design effort and represent the Contractor responsible ship that the Navy desires at delivery. The bidders are expected to consider the NTE values during their proposal preparation and take the appropriate measures to reflect the design and building practices that will meet the NTE values. If the BIWE exceeds the specified NTE values, the shipbuilder must describe the technical actions he will take within the specification requirements to detail design and construct the ship so that the delivered ship will meet the NTE restrictions. The weight and moment impact of these technical actions shall be included as Appendix (C) to the BIWE. The solicitation response cost estimate must also reflect this weight and/or moment reduction program. All BIWE's will be evaluated during the Source Selection process. BIWE displacement and KG numbers that are greater than the NTE values and are not adequately addressed in an Appendix (C) will preclude a contract award to that bidder.

(b) A Preliminary Weight Control Plan which outlines the planning and procedures to be followed in meeting the weight control responsibilities described in the contract and the specifications. The subjects that shall be addressed in this Plan are provided in DOD-STD-2137(SH). If a design subcontractor is to be retained, define the scope of the design subcontractor's participation in the weight control process and describe the management control to be used in directing the subcontractor's efforts.

(c) Resumes of personnel who will have weight control responsibilities. If a design subcontractor is to be retained, provide resumes of personnel in both the prime contractor's and the subcontractor's organizations who will have weight control responsibilities.

(3) The Deputy Commander for Ship Design and Engineering (SEA 05) shall develop the above weight control program elements for inclusion in the solicitation package. During the source selection process, SEA 05 shall designate a factor leader for weight control to evaluate the pertinent solicitation deliverables. Resumes will be scored on their face value and the PWCP will be evaluated against the criteria for an acceptable plan as defined in DOD STD-2137(SH). The BIWE's shall be evaluated as follows:

- o All of the BIWE's will be reviewed to determine their technical validity. Those which are acceptably complete and accurate, i.e., technically valid, will be separated from those with fatal flaws (those which contain gross deficiencies, omissions, or insufficient details

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to conduct an adequate evaluation). A technically invalid weight estimate will be judged unsatisfactory and a recommendation will be made to preclude an award to that bidder unless corrected during a best and final offer opportunity.

- o The valid BIWE's will be used in a comparative analysis against the Navy's weight estimate for the purpose of verifying the NTE values.
- o The valid BIWE's will then be compared with the NTE values.
  - If all valid BIWE's are at or below the NTE numbers, then all are graded satisfactory and the contract is awarded based on the source selection scoring criteria.
  - If there are valid BIWE's above and below the NTE numbers, the ones that exceed the specified values without describing an adequate weight and/or moment reduction program in Appendix (C) will be graded unsatisfactory and a recommendation will be made to eliminate those offers from the competition.
  - If all valid BIWE's are above the NTE numbers and none contain an adequate Appendix (C) a recommendation will be made to suspend the solicitation. The design would then be modified or a CNO level decision would be sought to proceed with degraded service life allowances.

b. Ship procurements that utilize performance type specifications, i.e., Circular of Requirements (COR), shall designate the required service life allowances. The Navy will specify certain performance characteristics, such as, speed, endurance, payload, etc. in the acquisition contract.

(1) The Program Offices shall ensure that the solicitation package includes the following weight control program elements:

- o Weight Control Contract Clause
- o Incentives for weight and KG control
- o Proposal Submittal Requirements
  - Preliminary Allocated Baseline Weight Estimate (PABWE)
  - Preliminary Weight Control Plan (PWCP)
  - Resumes

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- o Attachments
  - Factors for determining loads
  - Weights for GFM
- o Circular of Requirements Sections
  - Weight control requirements and service life allowances
  - Limits for displacement, KG, list, and trim
- o Contract Data Requirements
  - Appropriate deliverables package

(2) Each responding shipbuilder shall be required to submit the following:

(a) A PABWE which demonstrates that the ship as proposed will be delivered with the required service life allowances. The PABWE shall consist of the Light Ship (condition A), Full Load (condition D), and Capacity Load (condition E) conditions. Definitions for these loading conditions are provided in DOD-STD-2137(SH). In addition to the reporting requirements of DOD-STD-2137(SH), values for the following characteristics shall be computed for each load condition: trim, list, drafts, and metacentric height, uncorrected and corrected for free surface. The PABWE shall contain estimated values for detail design and building margin. The technical analysis that substantiates the margin values shall be included as Appendix (A) to the weight estimate. Factors and values for determining variable loads and weights for Schedule "A" (GFM) are provided as an Attachment in the contract package. The variable load shall be distributed realistically throughout the ship in appropriate spaces. A separate report of GFM weight data compiled in accordance with DOD-STD-2137(SH) shall be included as Appendix (B). Items shall be grouped using the first three digits of the numbering system as defined in NAVSEA EXPANDED SHIP WORK BREAKDOWN STRUCTURE (ESWBS), (NAVSEA S9040-AA-IDX-010/SWBS 5D and Appendix A of NAVSEA S9040-AA-IDX-020/SWBS 5D). The PABWE shall contain details for each three-digit element. An example of the level of sufficient detail will be provided at the shipbuilder's request.

(b) A PWCP which outlines the contractor's planning and procedures to be followed in meeting the weight control responsibilities described in the Contract and the COR. The subjects that shall be addressed in this Plan are listed in DOD-STD-2137(SH). If a design subcontractor is to be retained, define the scope of the design subcontractor's participation in the weight control process and describe the management controls to be used in directing the subcontractor's efforts.

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(c) Resumes of personnel who will have weight control responsibilities. If a design subcontractor is to be retained, provide resumes of personnel in both the prime contractor's and the subcontractor's organizations who will have weight control responsibilities.

(3) SEA 05 shall develop the above weight control program elements for inclusion in the solicitation package. During the source selection process, SEA 05 shall designate a factor leader for weight control to evaluate the pertinent solicitation deliverables. Resumes will be scored on their face value and the PWCP will be evaluated against the criteria for an acceptable plan as defined in DOD-STD-2137(SH). The PABWEs will be evaluated for accuracy and completeness to determine their technical validity.

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