DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
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IN REPLY REFER TO

NAVSEAINST 5240.2A
Ser 04X2/128
OCT 25 1999

NAVSEA INSTRUCTION 5240.2A

From: Commander, Naval Sea Systems Command

Subj: MANAGEMENT CONTROL SYSTEM FOR INDUSTRIAL PROCESSES IN NAVAL SHIPYARDS

Ref: (a) NAVSEA TL855-AA-STD-010, Naval Shipyard Quality Program Manual, 21 Mar 1998
(b) NAVSEAINST 5400.95A, Surface Ship and Submarine Work - Policy for Non-Nuclear Non-Conformance Approvals and Delegation of Technical Authority to Shipyard and SUPSHIP Chief Engineers, 29 Apr 1998
(c) NAVSEAINST 5240.1B, Methods and Standards Program for Naval Shipyards
(d) NAVSEA Ltr 5230 Ser 04X2/073, Subj: Trade Skills and Trades Skill Designators, 24 May 1999

Encl: (1) Preparation and Control of Industrial Process Instructions/Uniform Industrial Process Instructions

1. Purpose

a. Establish a system for identification, selection, management, control, and improvement of industrial processes in the naval ship maintenance activities consistent with reference (a). This instruction is a major revision and should be read in its entirety.

b. Establish clear lines of authority and accountability for ensuring that shipyard industrial processes result in safe, effective, and efficient accomplishment of desired technical outcomes. Reference (b) defines the technical authority delegated to Naval Shipyard Chief Engineers.

c. Provide direction for the content, format, preparation, and control of Industrial Process Instructions (IPIs) and Uniform Industrial Process Instructions (UIPIs), in accordance with enclosure (1).

d. This instruction takes effect when new instructions are written or existing instructions are being changed/revised.

2. Cancellation. NAVSEAINST 5240.2 is superseded.

3. Scope. This instruction applies to all non-nuclear industrial processes accomplished by the shipyards. It does not apply to industrial processes under the control of the Deputy Commander, Nuclear Propulsion Directorate (SEA 08). UIPIs are intended for use by all Navy ship maintenance activities, as appropriate.

4. Definitions

a. Industrial Process. A series of operations used to achieve the desired product and technical outcome. These processes are used in the repair, alteration, inactivation, or disposal of ship systems or components.

b. Industrial Process Instruction (IPI). A document that defines industrial processes so complex or critical that they must be controlled at the shipyard level. An IPI includes system information (e.g., procedures, responsibilities, equipment, material, trade skills, training, quality assurance, and occupational safety, health, and environmental controls) essential to the accomplishment and control of the industrial process. It is intended to be a complete, consolidated, work execution tool for the mechanic and a technical control tool for management.

c. Uniform Industrial Process Instruction (UIPI). An IPI that prescribes a method for accomplishing industrial processes which must be performed the same way at all applicable Naval Shipyards, unless a deviation has been approved (see paragraph 4d). It is recommended that all Navy ship maintenance activities share in the use of the UIPI. Standardized training plans are to be developed for UIPIs as directed by paragraph 2.j., enclosure (1). The implementing shipyard may modify the UIPI for use by providing supplemental information, per enclosure (1) paragraph 9.a. This information will be clearly annotated as a supplement (i.e., similar to using a change bar). If labor standard data exists for a UIPI then reference those Uniform Methods and Standards (UM&S) document(s), developed per reference (c), that contain data related to the UIPI.

d. Request for Deviation. The UIPI Steering Committee must approve all shipyard requests that they not be required to use a specific UIPI. Approved deviations are valid only for the requesting shipyard.

e. Originator. The individual or organization that is assigned responsibility for preparing and thereafter maintaining an IPI or UIPI.

f. Cognizant Technical Code. The individual or organization that has been assigned technical authority for a process, component, or system. The originator may or may not work for the technical code. However, in all cases, technical code authority supersedes the Originator's authority.

g. Lead Shipyard. The Naval Shipyard designated by NAVSEA as being responsible for originating and maintaining an IPI/UIPI for a specific process.

h. IPI/UIPI Coordinator. Individual or organization appointed by the Engineering and Planning Officer, Code 200, responsible for the effective implementation and control of the Industrial Process Control System.

i. Industrial Process Control System. A system provided to control and manage IPIs/UIPIs as defined by this instruction.

j. UIPI Steering Committee. Made up of a representative from NAVSEA and each shipyard, and responsible for maintaining this instruction by coordinating guidance and actions for UIPI development and implementation, requests for deviations, and making decisions on unresolved comments related to new, revised, or cancelled UIPIs.

k. Higher Order Document. Not a local shipyard document. NAVSEA instructions and Military Specifications are examples of higher order documents.

l. Implementation Plan. Upon issuance of a UIPI each Naval Shipyard shall develop an implementation plan detailing the steps necessary to locally implement the UIPI At a minimum an implementation plan will address when training will be provided, indicate which ship availability shall utilize the UIPI, what capital equipment/special tooling/facility changes are necessary and when they are planned, and when local supplements (e.g., OSHE

requirements) will be completed. This plan will be completed within 30 days after issuance of a UIPI and forwarded to the NAVSEA SHAPEC Director and the UIPI Steering Committee members.

5. Background/Discussion

a. NAVSEA established the Industrial Process Control System to assure that all technically complex processes are documented (especially critical production processes) and are performed the same at all Naval Shipyards, producing the same quality product or results. This set of processes/documents can be reviewed, modified, and improved from one overhaul to the next.

b. Industrial process instructions are classified by the implementing shipyard, in the following types:

- Type A: Industrial processes that need to be specifically invoked by reference and included with the technical work document (TWD) (e.g., TGI, 2 E-Spec, etc.).

- Type B: Standing industrial processes which a qualified journeyman mechanic is expected to know and perform. Type B instructions are cited in the general requirements section of the TWD.

- Type C: Standing industrial processes which a qualified journeyman mechanic is expected to know and perform. Type C instructions are not required to be cited in the TWD.

- Type D: Instructions which cover industrial processes, quality assurance, safety considerations, and environmental requirements that are related to operation and maintenance of shipyard owned/leased equipment, and are not specified in the TWD for shipboard or related shop work.

c. The complexity or criticality of an industrial process determines the appropriate level of management control, level of detail, and frequency of periodic review. Factors to consider include, but are not limited to:

(1) Certain systems/components are mission essential or are vital to Ship's Force safety and health. Consequently, industrial processes performed on these systems/components require additional control.

(2) Some industrial processes pose serious environmental, safety, and/or health hazards. This is a priority factor.

(3) The required skills/qualifications vary considerably among industrial processes. An unskilled worker can accomplish some processes without formal training; others require journeyman mechanic skills or specialized formal training and periodic certification.

(4) Industrial process historical failure rates and the potential impact of each failure.

(5) Some processes require special controls to achieve the desired technical results.

(6) Industrial processes vary from simple procedures with one or two steps accomplished by a single mechanic, to compound processes requiring close and complex coordination between two or more trades.

(7) When an industrial process involves use of new technologies or processes, where prior guidance and experience are limited, management control must be greater.

d. Sharing of personnel between Naval activities drives the need to assure that each UIPI have an associated training plan which is standard between all Naval shipyards.

6. Actions

a. The Chief Engineer at each shipyard is responsible for:

(1) Designating a shipyard representative to have authority at the UIPI Steering Committee.

(2) Assigning, reviewing, and approving IPIs and UIPIs and subsequent revisions/changes and deviations.

(3) Ensuring the assigned IPIs and UIPIs developed are easily understood and produce a technically correct product in a cost-effective manner.

(4) Determining whether COMNAVSEA 05 technical concurrence is necessary prior to approval of any UIPI.

Reference (b) defines the technical authority delegated to Naval Shipyard Chief Engineers.

(5) Approving periodic review cycle for each instruction.

(6) Incorporating the Industrial Process Control System into the engineering and planning function. The development of the TWD should take into consideration all applicable IPIs/UIPIs and reference or invoke them as needed.

(7) Ensuring that the process is in accordance with sound industrial engineering practices, and that special equipment or facilities required are available to the performing shop(s).

(8) Ensure that the process has a UM&S developed per reference (c). If there is not one in existence request this be accomplished.

(9) Assigning development of a plan within the Naval Shipyard to implement each UIPI and forward this plan to the local UIPI Coordinator to send to members of the UIPI Steering Committee and the NAVSEA SHAPEC Director.

b. UIPI Steering Committee is responsible for:

(1) Maintaining this instruction by coordinating guidance and actions for UIPI development and implementation.

(2) Reviewing and approving requests for process deviations.

(3) Reviewing and approving requests for cancellation.

(4) Designating Type A, B, or C for all UIPIs.

(5) Making decisions on unresolved comments related to new, revised, or cancelled UIPIs.

c. IPI/UIPI Coordinator is responsible for:

(1) Providing the administrative support for the Industrial Process Control System within the shipyard, as detailed in enclosure (1). This includes:

(a) Issuing IPI/UIPI numbers and maintaining an IPI/UIPI number log.

(b) Filing and distributing IPIs/UIPIs within the shipyard in accordance with enclosure (1). This includes changes, revisions, cancellations, deviations, and supplements approved for incorporation into the IPI/UIPI.

(c) Maintaining a history file for all IPIs/UIPIs implemented at their shipyard. History files shall contain records of all original issues, changes, revisions, cancellations, deviations, and supplements.

(d) Developing and administering a periodic review program for all IPIs/UIPIs implemented at their shipyard.

(e) Maintaining an index of all IPIs and UIPIs approved and issued for use at the applicable shipyard.

(2) Assigning the appropriate originating codes for action.

(3) Reviewing and forwarding the shipyard's comments on UIPIs prepared by other shipyards, using requirements of enclosure (1).

(4) Forwarding requests for a UIPI deviation for approval. Receiving approved deviations, and forwarding them to the cognizant technical code for implementation.

(5) Reviewing and concurring on local supplemental changes prepared by the cognizant technical code to implement approved UIPIs from other shipyards.

(6) Receiving approved UIPI cancellation notices and requests for deviation originating from other activities, and forwarding them to the cognizant technical code.

(7) Receiving proposed UIPI cancellation review requests from other activities, identifying the cognizant technical code, and designating review shops/codes.

(8) Forwarding the UIPI implementation plan to members of the UIPI Steering Committee and the NAVSEA SHAPEC Director within 30 days of UIPI issuance.

d. IPI/UIPI Originators are responsible for:

(1) Researching and integrating all requirements into the IPI/UIPI to establish the best industrial process to achieve the desired technical outcome in the most effective, efficient, safe, and environmentally sound manner.

(2) Incorporating the best corporate practices available from such sources as NAVSEA, other shipyards, SUBMEPP, PERA, SIMA, SHAPEC, etc., and incorporating latest Cumbersome Work Practice (CWP), Engineering for Reduced Maintenance (ERM), and Best Management Practice (BMP) Items.

(3) Monitoring the implemented use of the IPI/UIPI to assure the best process is in use and identified in the IPI/UIPI.

(4) Obtaining IPI/UIPI numbers from the IPI/UIPI Coordinator.

(5) Ensuring that the format of the IPI/UIPI is correct and in accordance with enclosure (1), that all sections are included and correctly presented, and that all shipyards, shops, and codes impacted by the instruction are given the opportunity to provide written comments prior to issue.

(6) Resolving conflicts and incorporating comments received from reviewing shipyards, shops, or codes.

(7) Obtaining final signatures.

(8) Returning the final IPI/UIPI with concurrence and/or approval signatures to the IPI/UIPI Coordinator for issue.

(9) Establishing the periodic review cycle for each instruction.

(10) Establishing QA requirements needed to achieve the desired end result.

(11) Identifying the competencies required for personnel qualified to conduct work defined within the UIPI, as identified in paragraph 2.j. of enclosure (1).

(12) Ensuring that every instruction complies with NAVSEA technical requirements.

e. Radiological Control Office (Code 105) is responsible for review and approval of all radiological control requirements and procedures. (NOTE: See paragraph 6.k(3) for requirements regarding Code 105 review of IPIs/UIPIs.)

f. Occupational Safety, Health and Environmental Office (Code 106) is responsible for:

(1) Reviewing and approving all safety and health requirements and precautions including medical/health qualifications. Ensuring that process documentation contains sufficient occupational safety and health procedures and controls necessary for personnel safety.

(2) Reviewing and approving pollution prevention, recovery material disposal, environmental compliance, and other environmental requirements and considerations. Ensuring that process documentation is accurate and complete in these areas.

g. Quality Assurance Office (Code 130) is responsible for review and approval of all quality assurance requirements. Quality Assurance ensures process documentation provides the desired product. This ensures the feedback requirements and procedures for monitoring process acceptability are adequate, and provide requisite quality control.

h. Operations Department (Code 300). Project Superintendents are responsible for:

(1) Identifying any process problems or improvements to the applicable shop and technical control code.

(2) Identifying any specific equipment, component, system or technical specification problem to the applicable shop and cognizant technical code.

(3) Resolving any problems/conflicts regarding the designated shop/code for each step in the method of industrial processes.

i. Production Resources Department (Code 900). Shop Superintendents are responsible for:

(1) Ensuring that personnel are knowledgeable, skilled, and trained (as applicable) in the IPI/UIPI requirements for the specific job to which they are assigned.

(2) Ensuring that training classes required by the IPI/UIPI exist. Work with the industrial process instruction originator and the training organization in the development of a training plan.

(3) Ensuring that designated shops have the capacity and capability to accomplish the industrial process and achieve the technical results specified by the method and requirements of the IPI/UIPI.

(4) Monitoring the use of the specified IPIs/UIPIs to accomplish the desired results/product in a safe, effective, and efficient manner.

(5) Ensuring approved IPIs/UIPIs, including deviations and supplements, are available for the shop mechanic's use.

(6) Providing access to a current file of applicable IPIs/UIPIs to each shop.

(7) Ensuring that process problems or improvements are identified and forwarded to the Originator.

j. Cognizant Technical Codes are responsible for:

(1) Reviewing IPIs/UIPIs for technical content.

(2) Incorporating comments, resolving conflicts, and consolidating shipyard comments on proposed UIPIs originating from other shipyards.

(3) Determining requirements for implementing other Shipyards' UIPIs. This may require integrating supplemental information and/or preparing a request for deviation to exclude those portions of the UIPI that cannot be implemented.

(4) Analyze UIPI feedback information, determine appropriate action, and provide response to the shops/codes. This action may include formal request for change, a request for

deviation, and/or integrating additional supplemental information or separate direction to the shop/codes.

k. Nuclear Engineering and Planning Department (NEPD) Codes Are responsible for reviewing and approving all technical and testing requirements used for nuclear interface work including new UIPIs originated by other shipyards. IPIs/UIPIs will not be originated for processes under the control of the NAVSEA Nuclear Propulsion Directorate (SEA 08). However, certain IPIs/UIPIs within the scope of this instruction have a direct interface and/or impact on nuclear or radiological control processes, documents, and/or ships' systems/components. NEPD is also responsible for assuring the following factors have been considered and are implemented in IPIs/UIPIs used for nuclear interface work as applicable:

(1) The degree of control necessary for nuclear interface work is specified and NEPD concurrence is indicated on the cover sheet.

(2) Requirements unique to nuclear interface work are specified in a manner that assures compliance with nuclear technical and administrative requirements (for example, those contained in the Naval Nuclear Quality Control Manual for Shipyards, NAVSEA 0989-062-4000 (including Appendix 2-1, paragraph 6); MIL-STD-767; NAVSEA 0389-0152) and provides ease of engineering incorporation and production workers' use.

(3) All newly developed IPIs/UIPIs will be reviewed for information that may affect nuclear or radiological control requirements/procedures. In these cases, Code 2300 and/or Code 105 shall ensure that special requirements/procedures are included in the instruction which will facilitate safe, efficient, and effective accomplishment of the process without adverse interface/impact on or from nuclear processes. If there is nothing that would require nuclear or radiological control procedures, an "N/A" will be shown in the designated line for Code 2300/Code 105 approval signatures. Codes 2300 and 105 will not be required to review and approve subsequent drafts or revisions unless new material with a potential effect on nuclear or radiological control procedures is introduced. If in doubt, the Originator should verify with Code 2300 and/or Code 105.

1. Other Shops and Codes. Support the IPI/UIPI system by originating instructions or providing technical information to instruction Originators or cognizant technical codes, as required.

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PREPARATION AND CONTROL OF IPIs/UIPIs

1. Numbering. All IPIs/UIPIs shall be identified with the numbering structure described in this instruction. The UIPI numbers will be assigned by the originating shipyard and will be applicable at all shipyards. Originating IPI/UIPI Coordinators shall issue IPI/UIPI numbers and maintain a log of IPI/UIPI numbers issued. This number shall consist of digits as follows:

a. Four-digit ship's system identification number, determined as follows:

(1) The ship's system identification number for surface ships and submarines shall be the first four digits of the Expanded Ship Work Breakdown Structure (ESWBS) number associated with the ship's system to which the IPI/UIPI applies. ESWBS are defined in NAVSEA S9040-AA-IDX-010/SWBS 5d, Volume I.

(2) Federal Supply Classification identifier

(3) Shop (i.e., 0038)

(4) If none of the above numbering schemes is applicable, then use four zeros (0000) as the ship's system identification number.

b. A ship's system identification number, assigned to an IPI/UIPI from a current ESWBS manual, will remain regardless of subsequent changes to the ESWBS manual.

c. Serial number. This number shall consist of the following, in the order presented:

(1) Single-digit code which identifies the originating activity:

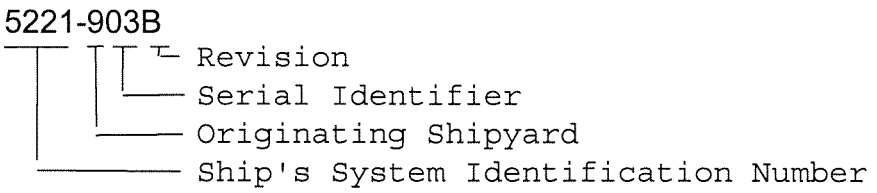
0. Pearl Harbor Naval Shipyard and Intermediate Maintenance Facility
1. Portsmouth Naval Shipyard
4. Norfolk Naval Shipyard
9. Puget Sound Naval Shipyard

Note: Numbers 2, 3, 5, 6, 7, 8, 10, and N were used for former shipyards and NAVSEA.

(2) Two-digit serial identifier from 01 through 49: Each originating shipyard must make certain that no serial identifier applies to more than one IPI/UIPI or Uniform Method and Standard (UM&S) (see reference (b)) which has the same system identification number.

(3) Revision Identifier. Each revision shall be identified with a single uppercase letter from A through Z, used consecutively. Revision identifier letters I and O are not to be used. Revisions J and P will indicate, in the reason for revision, that the preceding identifier was not used.

d. An example of the IPI/UIPI numbering structure:



2. Content. Each IPI/UIPI shall, at a minimum, contain the following sections and material. Optional material is also discussed herein but is defined as such. It is recognized that each IPI/UIPI is a unique document. Inclusion of table of contents, definitions, general notes, or other supplemental sections/material that will enhance the usability of the instruction is recommended. Process flow charts will be mandatory in UIPIs and are highly recommended in IPIs. Each IPI/UIPI shall use gender neutral language.

NOTE: All Exhibits contained within this Enclosure are in the order that they are mentioned.

a. Cover Sheet. A sample IPI cover sheet is provided, see Exhibit 1. A sample UIPI cover sheet is also provided, see Exhibit 2. Cover sheets shall present the following information:

(1) Title. Arrange the title so that the system or hardware to which the IPI/UIPI applies appears first and the process or action appears second. For example: "Shafting, Main Propulsion; Machining of."

(2) Number. The IPI/UIPI number assigned by the originating shipyard.

(3) Cancellations. List the identification and file number of any existing IPIs/UIPIs that the new instruction cancels. If the new instruction does not cancel any existing IPIs/UIPIs, enter the word "NONE." Each shipyard must identify local IPIs canceled by UIPIs.

(4) Issue date. Enter the date of original issue or most recent revision, as applicable.

(5) Sections. Identifies the sections appearing in IPIs/UIPIs. Inclusion of all sections is mandatory.

(6) Type. Indicate process type A, B, or C. See paragraph 5b of basic instruction.

(7) Ship Class Code. The classes or types of ships for which the IPI/UIPI is to be used. The following alphabetic codes are listed for the various classes and types of ships.

A. ALL SHIPS	F. ALL FF/FFG	P. AMPHIBIOUS
B. ALL SURFACE SHIPS	G. ALL DDG	Q. AUXILARY
C. ALL SUBMARINES	H. ALL DD	R. BB61
D. ALL CV/CVN	M. ALL SSBN	S. PHM 1
E. ALL CG	N. ALL SSN	X. OTHER

(8) Ship System. The name of the ship's system to which the IPI/UIPI applies. This is the system for which the ESWBS number in the instruction number is assigned.

(9) Trade Skill Designator (TSD). Enter the appropriate NAVSEA approved TSD of the lead trade skill involved in the industrial process.

(10) Key Shop. Enter the key production resource shop involved in the process. For all IPIs, including UIPIs, shipyards may tailor this to their individual requirements without lead shipyard or steering committee approval for deviations.

(11) Assist Shops/Codes. Enter the assist production resource shops and/or support codes involved in the process.

(12) Originator. Enter the following information for the Originator:

(a) Shipyard. Enter originating shipyard.

(b) Code. Enter originating branch code.

(c) Prepared By. Enter Originator's name.

(d) Phone. Enter the Originator's commercial phone number and Defense Switched Network (DSN) prefix.

(13) Standard Distribution. All UIPIs will be distributed to all Naval Shipyards (Code 240), all Ship Repair Facilities, all Supervisor of Ships (Code 200), NAVSEA 04X1, NAVSEA 04X2, and the assigned Ship Availability Planning and Engineering Center (SHAPEC) for each applicable ship class. This item is preprinted and requires no special action.

(14) Additional Distribution. Enter additional distribution here. Additional distribution will include all affected shops/codes, applicable signature codes, and applicable Engineering and Planning codes. Additional distribution addressees may be designated/identified as "Action" and/or "Info."

(15) Approvals. The Originator shall route the final draft IPI/UIPI, via the IPI/UIPI Coordinator, to shops/codes for approval signature. The following shop/code approval signatures are required for all IPIs/UIPIs: The Originator, the Chief Engineer, Codes 106, 130, 248, and 900. Code 2300 and/or Code 105 review and approval signature is required in certain cases defined in paragraph 6, Actions of the basic instruction. The NAVSEA designated Chief Engineer, per reference (b), must approve UIPIs. Where one or more of the required signature codes have no cognizance over the process or instruction, "N/A" may be entered in the appropriate blanks; however, individual concurrence sign-off as "N/A" shall be required on the original issue of the instruction. "N/A" concurrence sign-offs on subsequent revisions will be at the discretion of the Originator and the IPI/UIPI Coordinator based on the scope and impact of the revision.

Note: All original signatures must be on the same UIPI master cover sheet. Signatures on IPIs may be expedited by sending simultaneous copies to the individual codes for parallel signatures; their names (or "N/A") will then be typed on the IPI cover sheet, with a note indicating that each original approval signature is in the IPI history file.

Originating shipyards have the authority to add additional approval signature codes/shops on the instruction cover sheet, as required, or deemed appropriate (e.g., Key Shop Superintendent, Ship Test Branch).

Signatories have full responsibility and accountability for their areas of cognizance. Where additional signature shops/codes are added by the originating shipyard, the Originator shall ensure that the added shops'/codes' responsibility is defined and known.

b. References

(1) List reference documents in the sequence in which the first mention of them appears in the text.

(2) For higher order references (e.g., Naval Sea Systems Command (NAVSEA) instructions, MIL-STD, ASTM, etc.) give a complete identification, including document number, title, current revision/change (if applicable) and date of issue. For local references (e.g., IPIs, Production Resources Department instructions, etc.) give as identification, the document number and title.

(3) When referencing a higher order document, if there is an Advance Change Notice (ACN) associated with it, over 2 years old, include the ACN in the reference.

(4) If there is an invoking instruction at the individual shipyard for a higher order document, refer to it, not the higher order document.

(5) The intent of IPIs/UIPIs is to minimize reference documents required by the mechanic. References shall be used only if it is impractical to incorporate the information required in the body of the IPI/UIPI (e.g., engineering drawings).

(6) References shall be to the specific subsections of documents that are applicable to the process.

(7) This instruction shall not be included in the IPI/UIPI reference list.

(8) References that are not necessarily required on the job site with the work package, for a trained and qualified

worker to accomplish the process, but are only referenced for general background use shall be identified as such.

(9) Reference the Uniform Methods and Standards (UM&S), issued per reference (c), that apply to the IPI/UIPI. If no UM&S exists which relates to IPI/UIPI then request Code 248 to develop an UM&S if one is necessary.

(10) Local references will only be used in supplemental information for UIPIs.

c. Enclosures, Tables, and Illustrations

(1) Enclosures and tables, which are included as applicable, may appear in any logical and neat format. Use illustrations to the maximum extent practical to help the mechanic understand the technical direction. Use of charts, portions of references, job aids, etc., where they will assist clear use and presentation of materials, is highly recommended.

(2) List enclosures and tables in the order in which the first mention of them appears in the text. Give a complete identification of enclosures.

(3) Enter the instruction number on all enclosures and tables.

(4) The exhibits listed in this instruction are provided as examples that may be used as applicable. The following exhibits are attached at the end of this enclosure:

Exhibit 1 - Industrial Process Instruction (cover sheet)
Exhibit 2 - Uniform Industrial Process Instruction (cover sheet)
Exhibit 3 - IPI/UIPI Feedback Record
Exhibit 4 - Industrial Process Instruction Workflow
Exhibit 5 - Uniform Industrial Process Instruction Workflow
Exhibit 6 - Guidelines for Building Requirements Trees for IPI/UIPIs
Exhibit 7 - Requirements Tree (example)
Exhibit 8 - IPI/UIPI Change Notice Transmittal
Exhibit 9 - IPI/UIPI Revision Sheet
Exhibit 10 - IPI/UIPI Cancellation Notice
Exhibit 11 - UIPI Supplement Sheet

d. Purpose. This paragraph provides a brief statement about why the document has been developed or revised and/or summarizes the function of the IPI/UIPI.

e. Scope. This paragraph describes the extent of coverage of the instruction and its specific limitations. The following information should be included:

(1) Identification of the instruction as either a Uniform Industrial Process Instruction (UIPI) or an Industrial Process Instruction (IPI).

(2) The type level (i.e., Type A, Type B, Type C) assigned to the instruction, and a brief description of the requirements of the assigned type.

(3) When necessary, the Scope section will include General Notes to provide specific information on applicability of IPI/UIPI to current and future shipyard workload. Identify the advantages and benefits of the process (e.g., where a study or research and development was accomplished, the origin of the technology or cost savings, CWP, etc.).

(4) If the instruction contains classified material, the last sentence of the scope paragraph shall state the exact number of classified pages contained therein. Classified material shall be identified and handled in accordance with established shipyard procedures and requirements.

f. Section I: Equipment. This section identifies all special tools, apparatus, special utilities, and setup requirements for process accomplishment.

g. Section II: Material. This section describes materials and supplies essential for process accomplishment. (Note: The Originator must ensure that all materials listed in this section are approved for use.)

h. Section III: Occupational Safety and Health and Environmental Protection. This section briefly describes special hazards of the process, and the safety and health precautions which the workers must take, and cognizant supervisor must enforce, before, during, and after accomplishing the work to ensure that personnel safety is achieved throughout the process. The section identifies specific related safety, health, and

environmental regulatory training identified further in section V of the IPI/UIPI. This section also identifies any hazardous materials to be used and describes handling procedures and steps to follow in case of accidental exposure, ingestion, etc. Lengthy, detailed procedures will be defined in separate paragraphs within Section III. Brief health/safety warnings, cautions, and handling notes will be inserted at the appropriate location in the Method, Section VI, along with references to details in Section III.

(1) Medical qualifications will also be addressed in a separate paragraph within the Occupational Safety and Health (OSH) Section of all IPIs/UIPIs. If the process requires employees to meet/obtain special medical/health qualifications, then spell out the requirements. If none, so state.

(2) Environmental protection/pollution control and hazardous material/waste disposition requirements and procedures shall also be defined in separate paragraphs within this section. If none apply, so state.

i. Section IV: Quality Assurance. This section identifies those quality control measures required to ensure process accountability, control, and achievement of the desired technical outcome. The following information is to be included in this section: inspection and verification points and documentation of inspection results (in-process and final); general acceptance criteria, when practical (when criteria is too cumbersome to include, references to acceptance criteria source documents are acceptable); sampling or testing to verify process adequacy and compliance with technical specifications; special measurement requirements; General Test Specifications (e.g., seat tightness, NDT, hydro, component timing); acceptance/rejection criteria for tests and inspections and any other documentation and quality control measures required to achieve the desired technical outcome.

j. Section V: Training and Skills. This section describes the training, skills, and qualification requirements specific to the IPI/UIPI.

(1) The UIPI preparer shall, in consultation with the applicable Shop process owner and training organization, develop a set of required competencies for the UIPI. These are verb/object statements that describe the knowledge, skills, and

abilities to perform the processes specified by the UIPI. The competency listing should NOT include pre-requisite skills and abilities normally possessed by a journeyman mechanic as identified in the core and discretionary skills and qualifications listed for each trade skill identified by reference (d), such as blueprint reading, precision measurement, etc. The intent is to provide a single standard among shipyards of the essential competencies for the specified processes, but allow for flexibility among shipyards in how to meet the standards. The competencies may be satisfied by formal training, on the job training, or other management approved means of verifying worker competence as appropriate.

(2) In addition, the UIPI preparer shall list any applicable NAVSEA specified training and qualification requirements (such as Steam Plant Cleanliness, and SUBSAFE qualification) specific to the UIPI. When formal training plans are required, they shall be identified by title, sponsor, and course number. Include a requirement for refresher training, if necessary, to ensure changes and revisions to IPIs/UIPIs are properly implemented.

(3) The shop supervisor shall ensure that all employees assigned to a given job are properly trained and qualified. Formal training shall be documented in each employee's training record.

k. Section VI: Method. This section describes the way in which a worker accomplishes the process. It identifies the detailed steps of the process in their proper sequence for accomplishment.

(1) The method section must allow quick reading of the IPI/UIPI to find out who does what and when, eliminating vagueness and pinpointing responsibility. All the work to be done is spelled out as it occurs in sequence. The method tells how to proceed and who in the work process is responsible for each step. Each step is numbered, beginning with the first action and proceeding sequentially through the last. In those cases where steps or series of steps can be accomplished in parallel, they will be so identified. Specific shops/codes are committed to specific responsibilities and accountability.

(2) The method section shall be set up using a play-script style format as follows:

STEP #	ACCOUNTABLE SHOP/CODE or TSD	ACTION

(3) The Originator or the cognizant technical code, at each Naval shipyard, will designate which shop or code is responsible and accountable for each step in the method. This decision will be made on an individual Naval shipyard basis for all IPIs/UIPIs. This decision will be based on the most efficient and effective means to accomplish the method step, with consideration given to shop organization cognizance, training, safety, quality assurance, and support or technical code functional responsibilities. Questions or conflicts regarding the responsible and accountable shop or code for a particular step shall be referred to the Shop Superintendents or Project Managers for resolution. The designated shop or code shall be entered in the Accountable Shop/Code column of the Method Section and shall be subject to periodic review and revision by the Production Resources Department (Code 900).

(4) Specific safety, health, environmental protection, and quality assurance requirements shall be integrated into this section at the point in the procedure where they are applicable.

1. Section VII: Feedback. Where possible, IPIs/UIPIs shall contain in-process procedures for monitoring process effectiveness and acceptability. This may include standard statistical techniques or other suitable methods to identify the need to effect process improvements. IPIs/UIPIs shall contain a IPI/UIPI Feedback Record, see Exhibit 3. All involved shops/codes will identify recommended process improvements on the IPI/UIPI Feedback Record and forward these to the Originator.

(1) As a minimum, in-process controls and feedback procedures should enable the Originator and other cognizant technical authorities to determine the following in a timely manner: process productivity impediments/improvements, process failure rate, causes of process problems/failures, and corrective/preventive actions required.

(2) When Feedback Records are received, the Originator will review the feedback information, determine the necessary action, and provide a response to the requesting shop/code.

Note: The IPI/UIPI feedback system is intended to monitor the process effectiveness. Specific problems in applying the process to a specific ship or ship's components should be forwarded to the originating shipyard department for resolution.

m. Cross-Functional Flowchart. UIPIs shall contain a process flowchart. The inclusion of a process flowchart in an IPI shall be determined by local shipyard policy. The flowchart provides a tool for process review, improvement, and elimination of cumbersome work practices. The recommended flowchart is a cross-functional flowchart. The flowchart should establish a step by step graphical presentation of the process and provide a quick method to identify the actions and responsibilities of individual shops and codes. An IPI/UIPI could require more than one cross-functional flowchart. If there is a change in the instruction, it must be changed in the flowchart. See Exhibit 4 (two pages) for cross-functional flowcharts depicting the IPI workflow, and Exhibit 5 (two pages) for the UIPI workflow. The process flowcharting symbols are described and shown below.

Process Flowcharting Symbols

Process Block
Non-Decision Block
(can be square or rectangle) One arrow in and one arrow out

Decision Block
One arrow in and two out
One out arrow represents "Yes" the other "No"

Terminal Block
(start or stop) One arrow in or one out.

Connector
(on or off page)

Flow Directional Arrow

n. Notes, Cautions, and Warnings. Short and concise notes, cautions, and warnings may be placed as appropriate in the IPI/UIPI to emphasize important/critical safety or technical information. If it is necessary to insert a warning and a note, or a caution and a note, etc., then warnings shall precede cautions and cautions shall precede notes. Warning and caution statements shall not contain procedure steps or require specific actions to be performed. Notes, cautions, and warnings are defined as follows:

(1) Note - Used to emphasize important information.

(2) Caution - Used to provide information which, if not followed, may result in harm to personnel or equipment.

(3) Warning - Used to provide information which, if not followed, will result in harm to personnel or equipment.

o. Requirement Tree. For each instruction, a Requirement Tree (R/T), an electronic list, or an equivalent technical requirements tracking technique shall be developed to the corresponding higher order source requirement, covering at a minimum all technical requirements within the instruction. The preferred method is the R/T. See Exhibit 6 for R/T guidance and Exhibit 7 for an example of a R/T. For an electronic R/T template, contact Puget Sound Naval Shipyard, Code 241.2, (360) 476-4268.

3. Periodic Review

a. The Originator shall conduct periodic reviews of each IPI/UIPI to ensure that it is current, applicable, and prescribes the safest, most efficient and effective method for accomplishing the industrial process. Originating shipyards shall be responsible for review of developed UIPIs, although all performing shipyards are responsible to provide feedback including recommendations for review to the lead shipyard.

b. The periodic review cycle will be established by the Originator and approved by the cognizant Chief Engineer. For UIPIs, the UIPI steering committee shall establish the review cycle. This decision will be based on criticality of the instruction. Factors that should be considered include the following: how much and how often the process is performed, if the process involves high risk evolutions, if the process utilizes hazardous materials, and if the process requires keeping documentation (i.e., Objective Quality Evidence (OQE) records). This review will address all areas and sections of the IPI/UIPI. Shipyards shall develop and maintain a schedule and plan of action for accomplishing instruction periodic reviews. A note specifying the instruction's periodic review cycle shall be added to the cover sheet, see Exhibits 1 and 2.

c. Reference (a) requires that the Originator observe and discuss the procedure with the users of the instruction. If NEPD concurrence is required, the Originator shall contact NEPD to determine if the nuclear interface requirements are still valid and current.

d. If a revision or change is necessary to make the instruction current then the Originator is responsible for issuing the change/revision in accordance with this enclosure.

e. If the instruction is current and does not require a change or a revision (i.e., the Originator has discussed the existing procedure with the users of the instruction and nothing has changed, and has verified that all references are accurate and up-to-date), then the Originator will notify the IPI/UIPI Coordinator in writing that the instruction is current and the review due date shall be revised accordingly.

f. IPI/UIPI will be reviewed at least every 5 years, unless otherwise specified, from the latest review date, for applicability. All IPIs/UIPIs that exceed 5 years since the last review will be reviewed for cancellation to determine if there is a valid need for the instruction. If the IPI/UIPI is still needed, a formal review will be conducted to ensure that it is current and correct.

4. Changes

a. A change is an interim modification of an instruction made between revisions. It is used for minor changes, urgent situations, and to minimize disruption of the production process. The normal method for modifying or changing IPIs/UIPIs shall be by revision (see paragraph 5 of this enclosure). Changes and/or identified problems will be incorporated into the next IPI/UIPI revision. Changes may be issued for any reason, but normally affect only a small portion of the instruction. When changes are required, page substitution is the preferred method to be used. The Originator shall submit the final change to The IPI/UIPI Coordinator. All affected paragraphs shall be identified with a side bar and the change number (e.g., CH-1). An IPI/UIPI Change Notice Transmittal Sheet, see Exhibit 8, shall be prepared by the Originator. It shall contain the change approval and review/concurrence signatures and will become part of the document. The IPI/UIPI Change Notice Transmittal, see exhibit (8) shall provide users with the following information:

(1) Number and title of the applicable IPI/UIPI.

(2) Sequential number of the change.

(3) Purpose of the change.

(4) Approval signature.

(5) Effective date of the change (optional).

(6) Actions required by the change:

(a) Replace all affected pages with the new pages (attached to the IPI/UIPI Change Notice Transmittal). Ensure that pages that are printed on two sides are accounted for when issuing new pages with the change transmittal.

(b) Insert the new IPI/UIPI Change Notice Transmittal Sheet behind the cover sheet as proof of authorization.

(c) On the cover sheet, enter the correct change number and date in pen-and-ink, in right-hand margin, and adjacent to the serial number.

b. Requests for changes to UIPIs may come from the originating shipyard as well as other Naval Shipyards and NAVSEA. The IPI/UIPI Coordinator will receive change requests from other shipyards and forward the request to the cognizant code/ Originator for evaluation and implementation at the next revision. If the request is urgent, they will prepare the change in the form of supplemental information and issue it locally as well as approving the change request and forwarding it to the other shipyards. If they do not concur to the request, the UIPI Steering Committee will be requested to review and resolve the problem.

c. The Originator is responsible for obtaining comments from applicable shipyards, shops, and codes. The Originator is also responsible for obtaining approval signatures from cognizant codes, as required by the nature of the change (except in the case of typographical error corrections and minor format related wording changes). The Originator is responsible for incorporating comments and resolving conflicts in comments.

d. Approval/concurrence signatures for IPIs/UIPIs, from those responsible for the change and those affected by the change, shall appear on the IPI/UIPI Change Notice Transmittal Sheet, see Exhibit 8. Changes to any IPI/UIPI that interfaces with nuclear work shall be concurred on by the NEPD and those shops/codes affected by the change.

Note: All changes shall be incorporated into the next revision.

5. Revisions. An instruction requiring major changes will be reissued completely, including cover sheet with new signatures, in accordance with the procedures detailed in this paragraph.

a. A revision identifier assigned by the IPI/UIPI Coordinator shall be added to the document number in accordance with paragraph 1c(3) of this enclosure.

b. The Originator shall incorporate approved changes/ modifications as necessary, keeping with the approved format. The Originator shall then send the draft revision out for comments, incorporate comments as applicable, and route the final draft for signatures. The Originator may request assistance from the IPI/UIPI Coordinator.

c. Major changes in the areas of policy, procedures, responsibility, reporting requirements, or other matters of substance shall be briefly summarized on the Revision Sheet (IPI/UIPI), which becomes part of the IPI/UIPI, see Exhibit 9.

d. After obtaining approval signature(s) on the cover sheet of the new revision, it shall be distributed and filed by the IPI/UIPI Coordinator. For implementation of UIPIs, see paragraph 9 of this enclosure.

e. A revision meets all requirements for a periodic review (see paragraph 3 of this enclosure).

Note: The signatures on UIPIs must be the originals on the final draft master. Signatures on IPIs may be expedited by sending simultaneous copies to the individual signature codes. Their names (or "N/A") will then be typed on the IPI/UIPI cover sheets, with a note indicating that approval signatures are on file with the instruction history file.

6. Cancellation of IPIs/UIPIs. To cancel an issued IPI/UIPI, the originator will submit a written request to the IPI/UIPI Coordinator stating the reason or the circumstance for the cancellation. The cognizant shipyard IPI/UIPI Coordinator shall route a copy of the IPI/UIPI to be cancelled and reasons for the proposed cancellation to all applicable Departments; and for a UIPI, to IPI/UIPI Coordinator at other shipyards. Reviewing shops/codes shall forward written concurrence or objections to

the IPI/UIPI Coordinator within 30 calendar days. Forward all replies to the cognizant shipyard IPI/UIPI Coordinator. The Originator of the IPI/UIPI must resolve objections to cancellation. If all interested shops/codes concur with the proposed cancellation, then the Originator shall proceed as follows:

a. An IPI shall be canceled by an IPI/UIPI Cancellation Notice, see Exhibit 10, with approval by the cognizant local Division Head.

b. A UIPI shall be canceled by IPI/UIPI Cancellation Notice, see Exhibit 10, with approval by the originating shipyard Chief Engineer.

c. Approved IPI/UIPI cancellation notices shall be distributed by the IPI/UIPI Coordinator. A copy of the cancellation notice, along with a copy of the canceled IPI/UIPI cover sheet marked with the word "CANCELED" and the cancellation date, shall be placed in the history file.

7. Forms. If an existing form is to be used, modified, or a new form developed, the following guidelines for preparing forms should be used:

a. Include instructions for filling out the form or indicate where forms/instructions can be found.

b. Forms shall be approved per local procedures.

c. Provide a filled-in sample form to illustrate action if the form is complex. Identify it as a "Sample".

d. If new or revised forms are being initiated for the instruction:

(1) Make the form a standard size.

(2) Label all blocks on the form.

(3) Number all the blocks (to key them to instructions).

(4) Use check-off blocks to reduce the number of blocks that must be marked "NA."

(5) Put the blocks on the form in a logical order (e.g., in the order the work is completed).

(6) Use existing forms when possible, instead of creating a new form.

(7) Consider providing instructions on filling the form out on the back of the form. This would apply mostly to forms that would be filled out by mechanics at the worksite where a copy of the instruction may not be readily available.

(8) Include the governing instruction number on the form.

8. IPI/UIPI Typing Guidelines

a. The following are basic typing guidelines. It is recognized that each IPI/UIPI is a unique document and may vary from other IPIs/UIPIs; however, by following the same general guidelines the final product will be more acceptable.

(1) Use 11- or 12-point block letter typeface and 8-1/2 x 11" bond paper.

(2) For printing purposes, headers on right hand pages shall be in the upper right corner and headers on left-hand pages shall be in upper left corner. This is so the header will always appear at the outside margin of the page in the bound document.

(3) Left, right, top, and bottom margins shall be 1". Headers and footers (including page numbers) shall be .5" from the top/bottom of the page. Left justified only is preferred.

(4) Follow the IPI/UIPI format as described in this enclosure.

(5) Type the page number in the footer at the center of the page, .5" from the bottom. Pages prior to Sections are in lower case Roman numerals, i, ii, iii, etc., beginning with the Table of Contents. The sections are numbered in Arabic format, beginning with page 2 (page 1 is not numbered).

(6) Enclosures, attachments, and appendices should be identified in a footer as "Enclosure (1)," "Attachment (A)," and/or "Appendix A," in sequential order, in the footer on the

outer side of the page. (See explanation of header position in paragraph 8a(2).) Number pages in Arabic numerals, beginning with page 2 (page 1 is not numbered). (See paragraph 8a(5).)

(7) The paragraph numbering within each section begins with the section number, then .1, and progresses sequentially (i.e., for Section II, the paragraph numbering would be 2.1, 2.1.1, etc.; 2.13.1, 2.13.1.1, etc.).

(8) Supplementary information attached to an enclosure will be labeled as an attachment (for example, Enclosure (1), Attachment (A)). In the text of the enclosure, refer to this as "attachment (A)." In the basic IPI/UIPI, refer to the attachment as "attachment (A) to enclosure (1)." Use of attachments should be kept to a minimum.

9. Implementation of Uniform Industrial Process Instructions. After the UIPI has been concurred by all shipyards, the cognizant shipyard's Chief Engineer will approve it and it will then be forwarded to the other shipyards for local department approval and distribution.

a. Supplemental Information

(1) Type A and B UIPIs are developed by a lead shipyard (as assigned by the UIPI steering committee) for use by all Naval Shipyards. Because of different facilities, equipment, and capabilities in each shipyard, some processes required in the approved UIPI may need further "How to" information or explanation in order to implement the UIPI at each shipyard. Also, assignments of responsibilities are occasionally different from one shipyard to the next. Therefore, local supplemental information to UIPIs is permitted.

(2) Typically, the type of supplemental information added is shop assignments, additional environmental or safety controls, etc. This supplemental information must not conflict or compromise any technical requirements prescribed. In addition, the preparing shipyard will clearly define the extent the process may be locally modified.

(3) Emergent changes can be incorporated as supplemental information on a case to case basis. Changes shall be forwarded to the cognizant shipyard for incorporation.

(4) Supplemental information is intended to bridge the gap between the approved UIPI and its application at the local level. However, supplemental information shall not change the method/process, or deviate from the approved process/procedure described in the UIPI.

b. Responsibilities/Procedures

(1) Local Cognizant Code

(a) Review the new approved UIPI and develop supplemental information as necessary.

(b) Supplemental information may be developed from existing local instructions, NAVSEA, and Department of Defense (DOD) directives, or special instructions developed for a specific process to provide additional "How to" information pertaining to environmental issues, additional safety measures, organizational differences, etc.).

(c) Supplements may be inserted directly in the approved UIPI in a manner consistent with the procedure for changes outlined in paragraph 4a of this enclosure. Annotate the supplement number (e.g., SUPP-1) and a side bar in the margin at the appropriate location in the basic UIPI.

(d) The Originator shall prepare a Supplement Sheet, see Exhibit 11, with a brief description of the supplemental information added. Obtain local department approval. Approval from NEPD is required on supplements to UIPIs interfacing with nuclear work.

(2) IPI/UIPI Coordinator

(a) Review UIPI Supplement Sheet, see exhibit (11) and effective pages in accordance with this instruction.

(b) Process, file, and maintain supplements as required.

(c) Make copies of UIPI package, including supplements, and distribute per UIPI distribution list.

INDUSTRIAL PROCESS INSTRUCTION

TITLE

SECTIONS

I EQUIPMENT
II MATERIAL
III OSH/ENVR
IV QA
V TRAINING/SKILL
VI METHOD
VII FEEDBACK

DISTRIBUTION

NO. _____
CANCELS _____
EFFECTIVE DATE _____

TYPE _____
SHIP CLASS CODE _____
SHIP SYSTEM _____
TSD _____
KEY SHOP _____
ASSIST SHOPS _____

ORIGINATOR
SHIPYARD NAVSHIPYD
CODE _____
PREPARED BY _____
PHONE/DSN _____
E-MAIL _____

APPROVALS

ORIGINATOR _____
CHIEF ENGINEER _____
106 _____
130 _____
248 _____
900 _____
2300 _____
105 _____

NOTE: For the names typed above or lines marked N/A, signed originals are on file with the IPI Coordinator.

THIS TYPE "A" INSTRUCTION SHALL BE FOLLOWED ON AUTHORIZED WORK WHEN SPECIFICALLY INVOKED ON THE WORK AUTHORIZING DOCUMENT. THIS TYPE "B" INSTRUCTION SHALL ALWAYS BE FOLLOWED UNLESS SPECIFICALLY REVOKED OR SUPERCEDED. THIS TYPE "C" INSTRUCTION SHALL ALWAYS BE FOLLOWED BY A QUALIFIED JOURNEYMAN MECHANIC. THIS TYPE "D" INSTRUCTION SHALL NOT BE USED FOR SHIPBOARD OR RELATED WORK. IF REFERENCED ON A SHIPBOARD OR RELATED WORK AUTHORIZING DOCUMENT WITHOUT SPECIFIC RATIONALE FOR INVOKING, REQUEST CLARIFICATION FROM THE PROJECT OFFICE OR THE PREPARER OF THE WORK AUTHORIZING DOCUMENT.

PERIODIC REVIEW: **THIS INSTRUCTION SHALL BE REVIEWED EVERY _____.**

UNIFORM INDUSTRIAL PROCESS INSTRUCTION

TITLE

SECTIONS

I EQUIPMENT
II MATERIAL
III OSH/ENVR
IV QA
V TRAINING/SKILL
VI METHOD
VII FEEDBACK

STANDARD DISTRIBUTION

FKP7 (C/240)
FB 30
All SUPSHIPs (C/200)
SEA 04M3 (SHAPEC)
SEA 04X1
SEA 04X2

ADDITIONAL DISTRIBUTION

NO. _____
CANCELS _____
EFFECTIVE DATE _____

TYPE _____
SHIP CLASS CODE _____
SHIP SYSTEM _____
TSD _____
KEY SHOP _____
ASSIST SHOPS _____

ORIGINATOR
SHIPYARD NAVSHIPYD
CODE _____
PREPARED BY _____
PHONE/DSN _____
E-MAIL _____

APPROVAL SIGNATURE

_____
CHIEF ENGINEER

DISTRIBUTION STATEMENT D: Distribution authorized to DoD and DoD contractors only; Administrative or Operational Use (date). Other U.S. requests shall be referred to (insert originating command).

THIS TYPE "A" INSTRUCTION SHALL BE FOLLOWED ON AUTHORIZED WORK WHEN SPECIFICALLY INVOKED ON THE WORK AUTHORIZING DOCUMENT. THIS TYPE "B" INSTRUCTION SHALL ALWAYS BE FOLLOWED UNLESS SPECIFICALLY REVOKED OR SUPERCEDED. THIS TYPE "C" INSTRUCTION SHALL ALWAYS BE FOLLOWED BY A QUALIFIED JOURNEYMAN MECHANIC. THIS TYPE "D" INSTRUCTION SHALL NOT BE USED FOR SHIPBOARD OR RELATED WORK. IF REFERENCED ON A SHIPBOARD OR RELATED WORK AUTHORIZING DOCUMENT WITHOUT SPECIFIC RATIONALE FOR INVOKING, REQUEST CLARIFICATION FROM THE PROJECT OFFICE OR THE PREPARER OF THE WORK AUTHORIZING DOCUMENT.

PERIODIC REVIEW: THIS INSTRUCTION SHALL BE REVIEWED EVERY _____.

IPI/UIPI FEEDBACK RECORD

IPI/UIPI NO.	CAT NO.
TITLE:	

FROM: NAME	SHOP	SECTION
TO: ORIGINATING/POINT OF CONTACT CODE		

PRESENT PROCESS:

PROCESS IMPROVEMENT:

SUPERVISOR SIGNATURE:	SHOP	PHONE	DATE

FORWARD COMPLETED PROCESS INSTRUCTION FEEDBACK RECORD TO THE ORIGINATING CODE.

IPI/UIPI FEEDBACK RECORD

IPI/UIPI NO.	CAT NO.
TITLE:	

FROM: NAME	SHOP	SECTION
TO: ORIGINATING/POINT OF CONTACT CODE		

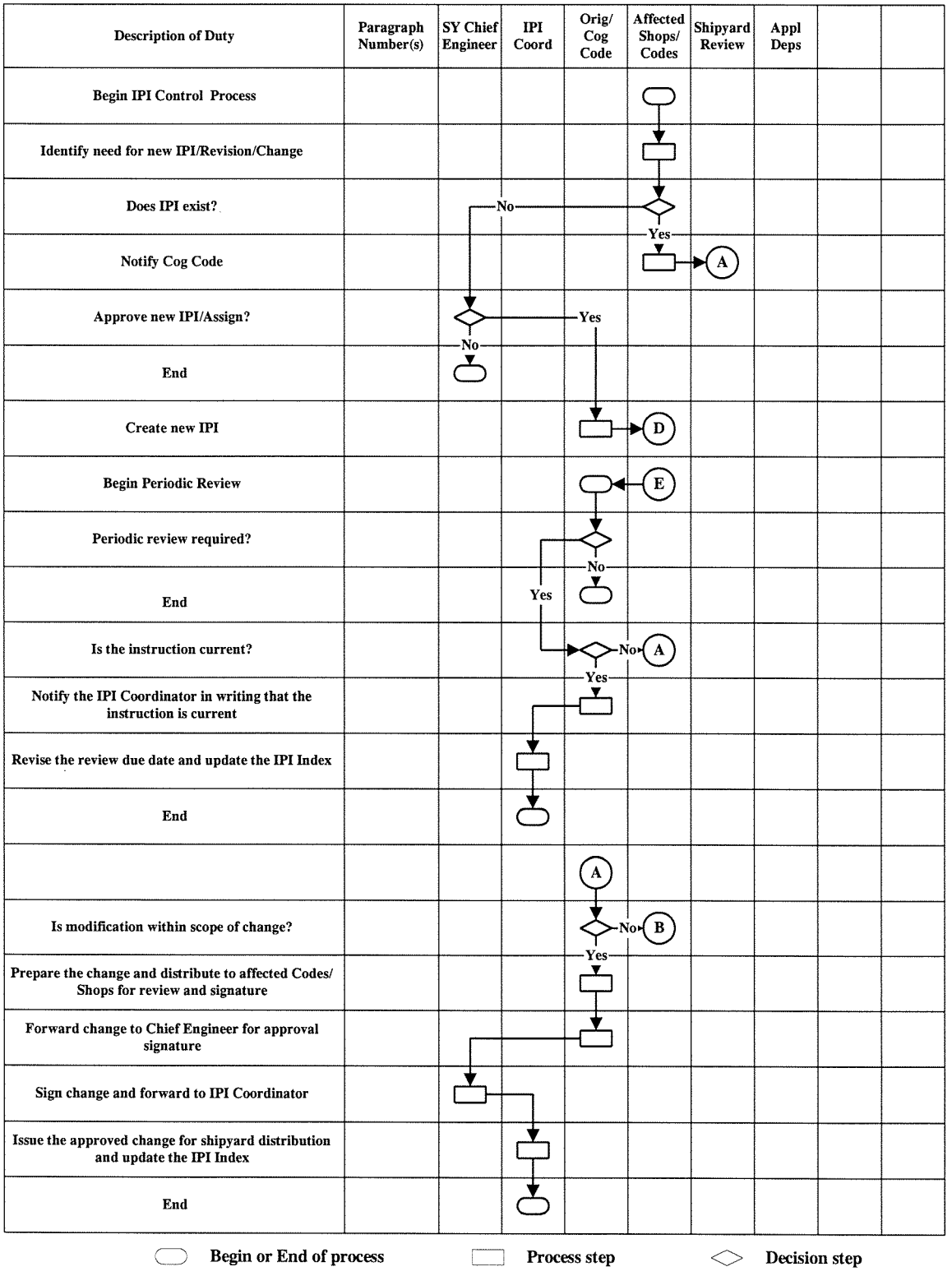
PRESENT PROCESS:

PROCESS IMPROVEMENT:

SUPERVISOR SIGNATURE:	SHOP	PHONE	DATE

FORWARD COMPLETED PROCESS INSTRUCTION FEEDBACK RECORD TO THE ORIGINATING CODE.

INDUSTRIAL PROCESS INSTRUCTION WORKFLOW



INDUSTRIAL PROCESS INSTRUCTION WORKFLOW

Description of Duty	Paragraph Number(s)	SY Chief Engineer	IPI Coord	Orig/ Cog Code	Affected Shops/ Codes	Shipyard Review	Appl Deps		
				B					
Cancel Instruction?				Yes C					
Prepare revision				No					
Conduct review and forward all comments to originator.							D		
Resolve comments, prepare signature copy and send out for approval signatures									
Sign and return for Chief Engineer approval signature									
Sign and forward to IPI coordinator									
Issue the approved revision/new IPI for shipyard distribution and update the IPI Index									
End									
				C					
Submit request to cancel									
Route cancellation package									
Review and forward forward written concurrence or objections within 30 calendar days									
Forward replies and a Cancellation Notice for signature to the originator									
Resolve objections to cancellation									
All agreed?									
Cognizant S/Y Division Head approves the Cancellation Notice				Yes					
Distribute the approved Cancellation Notice and update the IPI Index									
End									
Resolve conflicts									

No

Yes

Yes

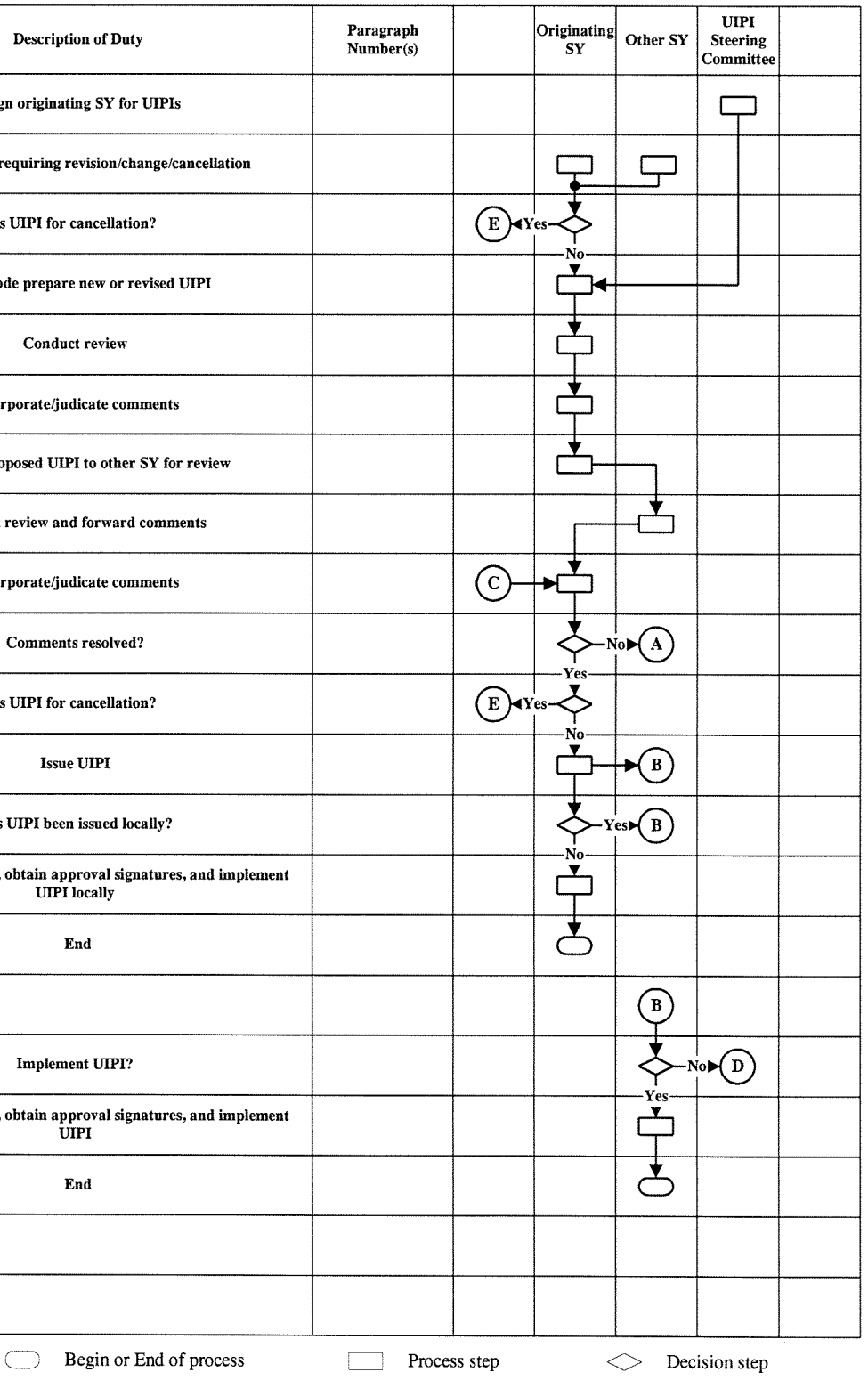
No

E

Begin or End of process Process step Decision step

UNIFORM INDUSTRIAL PROCESS INSTRUCTION WORKFLOW

Description of Duty	Paragraph Number(s)	Originating SY	Other SY	UIPI Steering Committee
Assign originating SY for UIPIs				
Identify UIPIs requiring revision/change/cancellation				
Is UIPI for cancellation?				
SY cog code prepare new or revised UIPI				
Conduct review				
Incorporate/judicate comments				
Forward proposed UIPI to other SY for review				
Conduct review and forward comments				
Incorporate/judicate comments				
Comments resolved?				
Is UIPI for cancellation?				
Issue UIPI				
Has UIPI been issued locally?				
Develop Supplement, obtain approval signatures, and implement UIPI locally				
End				
Implement UIPI?				
Develop Supplement, obtain approval signatures, and implement UIPI				
End				



Begin or End of process Process step Decision step

UNIFORM INDUSTRIAL PROCESS INSTRUCTION WORKFLOW

Description of Duty	Paragraph Number(s)		Originating SY	Other SY	UIPI Steering Committee	
			A			
Prepare review package for UIPI Committee Meeting						
Present at UIPI Committee Meeting						
Do comments impact local implementation?						
Put on hold until comments resolved			Yes	No		
Implement as IPI locally						
Resolve comments					Yes C	
Cancel development of UIPI					No	
End						
				D		
Request Deviation from UIPI						
Approve Deviation					No B	
Issue copy of approval to all Shipyards					Yes	
End						
			E			
Develop Cancellation Package						
Conduct cancellation review						
Resolve comments						
Comments resolved?			No A			
Cognizant Chief Engineer sign and issue Cancellation Notice			Yes			
End						

Begin or End of process Process step Decision step

GUIDELINES FOR BUILDING REQUIREMENTS TREES FOR IPI's

Column A: Copy and paste the IPI/UIPI number from top to bottom of the Tree in this column. (EXCEL SPREADSHEET)

Column B: List each paragraph number which identifies a "requirement" in this column. Include requirements (if found) in the Purpose, Scope, and all enclosures and appendixes.

Column C: Provide a brief description of requirement in this column. If the paragraph identifies more than one requirement, enter the next requirement on the next row, etc.

Column D: If the requirement identifies a responsible shop or code, list it in this column. If the requirement is a general Shipyard requirement, indicate it as "SHIPYARD".

Column E: Indicate "L" if the source requirement is a local (Shipyard) generated source, or OS if the source requirement is off station, i.e.: NAVSEA, VENDOR, CODE OF FEDERAL REGULATIONS, ETC.

Column F: List the Source Requirement Reference in this column. If the requirement description identifies multiple source requirement references, list each one on a separate row. If the requirement is contained within the instruction that the tree is being written for, then identify the source as "Local". Where the same source reference is used more than once in the tree, write it exactly the same way each time it is used.

Column G: Indicate the paragraph number within the source requirement reference which identifies the requirement. If it is a general requirement, write "Local" in this column.

Column H: Used for any comments which may be valuable.

REQUIREMENTS TREE FOR

NAVSHIPYDPUGET INDUSTRIAL PROCESS INSTRUCTION 0505-903
Orig. Code 260.3

IPI Number	Paragraph Number	Requirement Description	Responsible Shop/Code	Local/ Off Station	Source Requirement Reference	Source Para. #	Comments
0505-903	6.4.3.4.6	Requirement for personnel involved in the handling and disposal of plumbing system and CHT system fluid to observe precautions of ref	Shop 90	L	NAVSHIPYDPUGET Process Instruction 0593-716	Local	
0505-903	6.4.3.4.6	Requirement for personnel involved in the handling and disposal of plumbing system and CHT system fluid shall have received polio and tetanus-diphtheria inoculations	Shop 90	OS	BUMED 6230.15	Local	
0505-903	6.4.3.4.7	Requirement for the minimum PPE for personnel performing transfer operations of liquid wastes shall be disposable rubber or nitrile gloves as appropriate for the classification of the liquid waste being transferred	Shop 90	L	Local	Local	
0505-903	6.4.3.4.7	Requirement for eyewash stations where hazardous wastes are transferred	Shop 90	L	NAVSHIPYDPUGETINST 5100.66	Section 2 Chapter 6	
0505-903	6.4.3.4.8	Rqt to install sufficient exhaust ventilation & maintain to preclude airborne chemical contamination levels from exceeding permissible levels during work in areas where hazardous or volatile liquids are drained or transferred.	Shop 90	L	Local	Local	
0505-903	6.4.3.4.9	Rqt to exercise extreme care when transferring liquid waste near areas subject to radiological controls to prevent a spill of liquid into those areas	Shop 90	L	Local	Local	
0505-903	6.4.3.4.9	Requirement to contain and clean up any liquid spilled outside areas subject to radiological controls	Shop 90	L	NAVSHIPYDPUGETINST 5090.1	Local	
0505-903	6.4.3.4.9	Requirement to stop any spill source of liquid which enters an area subject to radiological controls outside the area and contact C/105 for assistance	Shop 90	L	Local	Local	
0505-903	6.4.3.5	Rqt to segregate all liquid wastes except "gray water" in portable tanks prior to discharge to sanitary sewer	Shop 90, ENV COORD Code246 WTC	L	NAVSHIPYDPUGETINST 5090.5	Appendix D	
0505-903	6.4.3.5.1	Rqt to have approval of the Environmental Coordinator or C/246 WTC to use shipboard system tanks for interim storage of " Gray Water".	Shop 90, ENV COORD Code246 WTC	L	Local	Local	

IPI/UIPI CHANGE NOTICE TRANSMITTAL

Instruction No._____Rev._____Ch._____

Document holder will make the following changes:

1.

Purpose or reason for change:

Concurrence signatures and dates. (For change_____only.)

ORIGINATOR	CODE	DATE	CONCURRENCE SIGNATURE	SHOP/CODE	DATE
FIRST LEVEL SUPERVISOR	CODE	DATE	CONCURRENCE SIGNATURE	SHOP/CODE	DATE
SECOND LEVEL SUPERVISOR	CODE	DATE	CONCURRENCE SIGNATURE	SHOP/CODE	DATE
*NEPD CONCURRENCE	CODE	DATE	CONCURRENCE SIGNATURE	SHOP/CODE	DATE

*Enter "NOT REQUIRED" IF APPLICABLE.

APPROVED_____DATE_____

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IPI/UIPI REVISION SHEET

INSTRUCTION NO._____REV. _____

Revision - Brief Description:

1.

This document has been reviewed by Codes/Shops:_____

_____

All comments from reviewing Codes/Shops have been incorporated in this document or otherwise resolved.

ORIGINATOR SIG._____CODE_____

FIRST LEVEL SUPERVISOR SIG._____DATE_____

SECOND LEVEL SUPERVISOR SIG._____DATE_____

IPI/UIPI CANCELLATION NOTICE

IPI/UIPI No. _____

TITLE _____

1. The proposed cancellation of this instruction was issued for shipyard review, and all concurred that the instruction should be canceled. It is to be replaced with

_____

(If there is no superseding document, enter "not applicable")

2. Holders of this instruction shall remove it from their file.

APPROVED _____

DATE _____

DISTRIBUTION:

UIPI SUPPLEMENT SHEET

UIPI No. _____ Rev. _____

Supplemental Information

Brief Description:

1.

Concurrence signatures and dates are for supplemental information only.

ORIGINATOR: DATE:	* CODE 2300: DATE:
CODE 106: DATE:	* CODE 105: DATE:
CODE 130: DATE:	
CODE 248: DATE:	
CHIEF ENGINEER DATE:	
CODE:900 DATE:	

* Enter "Not Required" if applicable