



DEPARTMENT OF THE NAVY
COMMANDER
NAVY REGIONAL MAINTENANCE CENTER
9170 SECOND STREET, SUITE 245
NORFOLK, VA 23511-2325

CNRMCINST 4700.9

Code 200

20 Apr 12

CNRMC INSTRUCTION 4700.9

From: Commander, Navy Regional Maintenance Center

Subj: AVAILABILITY QUALITY MANAGEMENT PLAN (QMP) STANDARD
OPERATING PROCEDURE (SOP)

Ref: (a) NAVSEAINST 5400.108A Policy for Quality
Management of Work on Non-Nuclear Surface Ship
Critical Systems
(b) COMFLTFORCOMINST 4790.3 Joint Fleet Maintenance
Manual (JFMM)
(c) CNRMC ltr 4700 Ser C211/091 of 18 Jul 11, Surface
Ship Availability Work Certification and Completion
Requirements
(d) NAVSEA Standard Items
(e) COMNAVSURFPAC/COMNAVSURFLANTINST 3504.1, Redlines
Implementing Instruction

Encl: (1) Quality Management Plan approval memo format
(2) Work Item Quality Management Plan
(3) Non-Mandatory Contractor Oversight
(4) Weekly QA Oversight Plan

1. Purpose. To establish the requirements for determining, preparing and executing a Quality Maintenance Plan (QMP) for contractor-accomplished surface ship availabilities. This instruction supplements the requirements outline in references (a) through (e). The QMP encompasses a variety of steps necessary to ensure major ship availabilities are conducted in a manner that supports Naval Supervising Activity (NSA) certification of the work conducted.

2. Scope. QMPs are required for all Chief of Naval Operations (CNO) Availabilities and other availabilities (Continuous Maintenance Availability (CMAV), Window of Opportunity (WOO), etc..) greater than three (3) weeks in length. Availabilities (CNO, CMAV, Continuous Maintenance (CM), and Emergency Maintenance (EM)) will consist of a Project Team (PT) led by the Project Manager (PM).

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3. Background. This SOP provides instruction and promulgates responsibilities for the preparation and execution of the QMP by PT. The plan will be prepared by the assigned Quality Assurance Specialist (QAS) (Code 130) using enclosure (2), with input from the Availability Project Team, including assigned personnel from Engineering Department (Code 200) and Waterfront Operations (Code 300). PM has the responsibility for overall execution of the QMP. Code 130 will prepare, maintain, and update QMP as work progresses and new/growth work is added to the availability. Once the QMP is prepared by the QAS, it is reviewed by the Code 200, Code 300, and the Code 130 prior to approval by RMC Commanding Officer. After initial approval, the QMP may be expanded at the PTs discretion. It will be the responsibility of the entire PT (PM/Project Team Engineer, QAS, Ship Building Specialist (SBS)) to ensure this plan is implemented and executed.

4. Discussion. The QMP is prepared prior to the start of the availability based on a variety of factors including, but not limited to, known contractor performance problems, risk of contractor failure in the work effort, risk associated with system or component failure, redundancy, potential impact of the work item to key event achievement. The QMP involves several components:

a. Validation of the prime contractor's approved Quality Management System (QMS) per reference (d) 009-04.

b. Work specification review for technical correctness, confirmation of the requisite (V), (I), (Q) and (G) point observations, ability to achieve the desired physical work aboard ship, and ability to capture the requisite Objective Quality Evidence (OQE) supporting milestone, key event, and end-of-availability certifications. This aspect determines the minimum mandatory oversight to be applied to the availability, through the use of required reports and (G) point observations.

c. Planning and scheduling of non-mandatory oversight in the form of Product Verification Inspections (PVI), Procedure Review (PR), and Procedure Evaluations (PE).

d. Implementation of Expanded Process Control Procedures (EPCP) where required.

e. Auditing of processes involved in the collection and validation of OQE. Audits will be managed by the QA Audits and

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Programs Division (Code 132) will address the following on a sample basis:

(1) NMD (G)-Point tracking and maintenance is consistent with the individual work items and associated NAVSEA Standard Items. (G)-Point completion recording is current with work progression and consistent with the recording of the contractor's Test and Inspection Plan.

(2) Population of the contractor's Test and Inspection Plan is consistent with the corresponding (V), (I), (Q) and (G)-Points required by the individual work items and associated NAVSEA Standard Items.

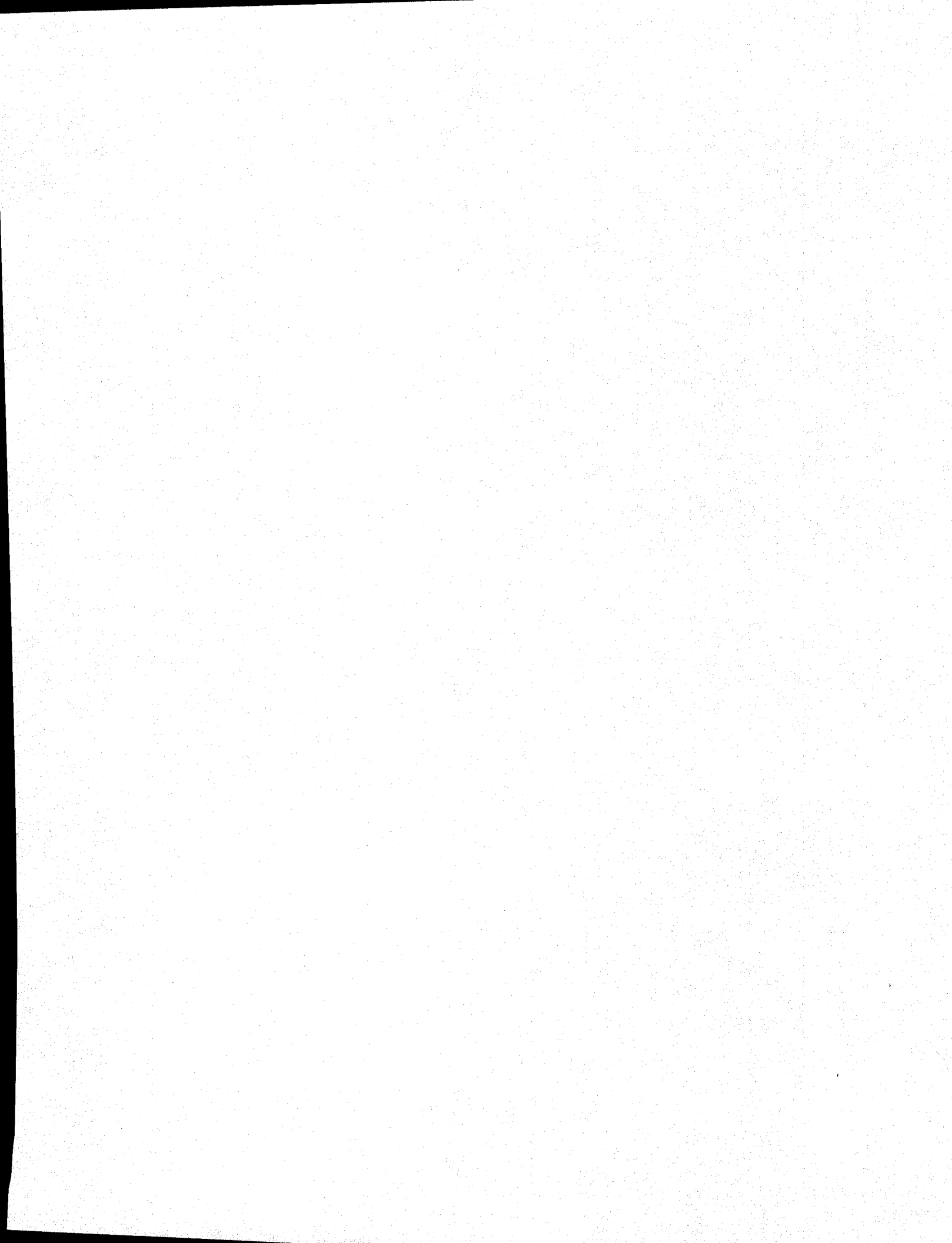
(3) Maintenance of the contractor's Test and Inspection Plan is up to date with work progression and completed tests and inspections are in accordance with reference (d) 009-04 and 009-67.

(4) OQE documents required by work items are captured and complete.

(5) Closeout processing of completed EPCP.

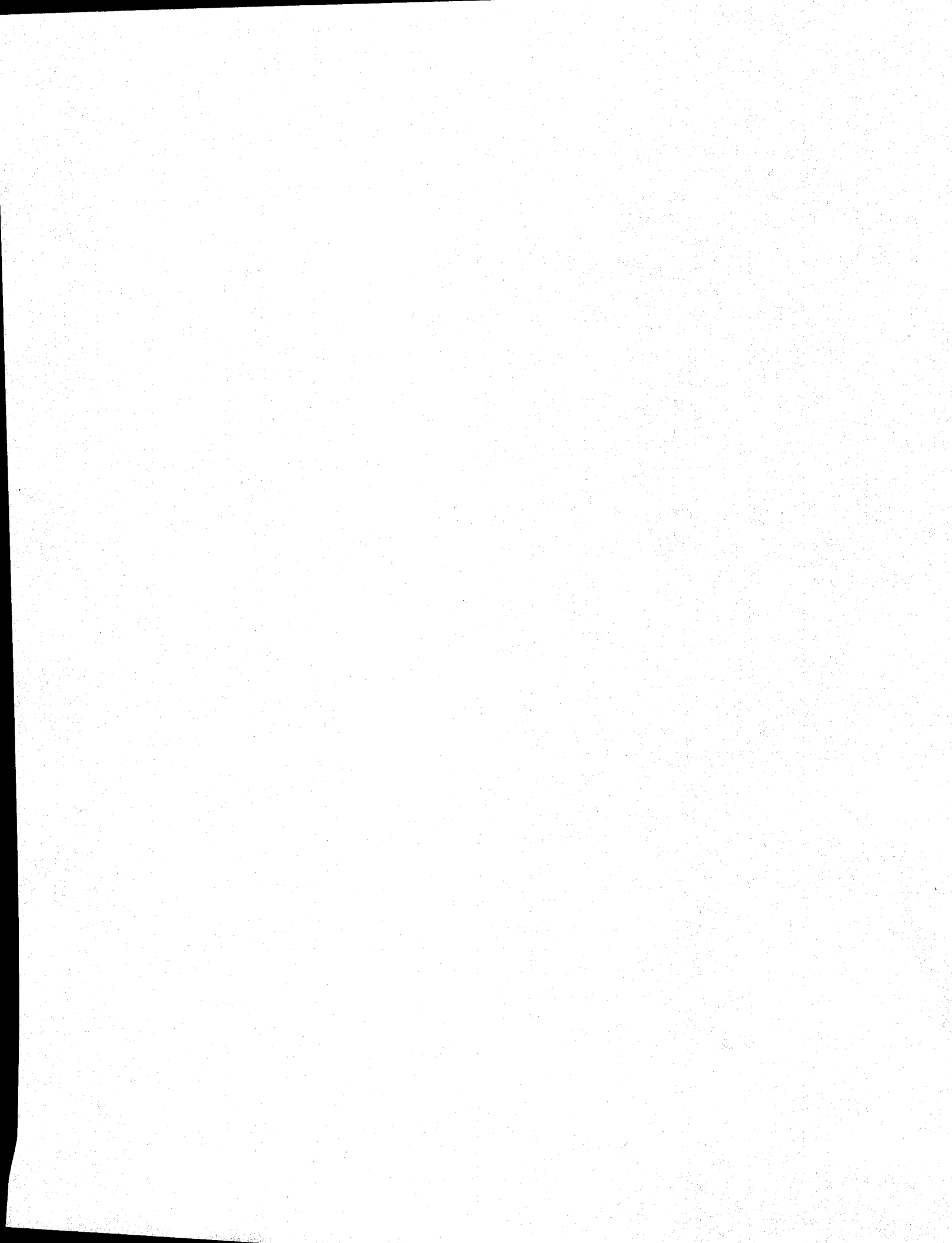
f. It is not the intent of the QMP to provide 100% oversight coverage of every work item in the work item specification package. The methods and measures employed are selected to provide a degree of oversight that is risk-based and achievable within the available resources.

5. Procedure. The QAS assigned to the availability shall be responsible for preparation and maintenance of the QMP using enclosure (2), with inputs from RMC Code 200 and Code 300. PM shall be responsible for the overall execution of the QMP. The QAS will support this effort by consolidating the various contributions into the approval documents of enclosures (1) and (2), and through preparation of the Weekly QA Oversight Plan in enclosure (4). The following describes the process of creating the QMP. This should begin NLT A-60 for CNO availabilities and A-30 for non-CNO availabilities greater than three weeks in length. The QAS is tasked to ensure the QMP is prepared and approved NLT 15 days prior to the start of the availability. Circumstances causing delays in the preparation of the QMP and an inability to meet the above milestones will be included in the submitted approval memorandum of enclosure (1).



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- a. The PM will ensure that the work items in the work specification package have undergone the required technical, quality assurance and MT required reviews prior to Government approval of the work item.
- b. The QAS will determine, with the assistance of Code 132, if the prime contractor has had a satisfactory QMS audit within the required periodicity, weaknesses noted, and any outstanding corrective actions as a result of the audit. This information will be used in assessing the contractor-based risks associated with the availability.
- c. The QAS will review the previous four QTRs of available Quarterly Data Reports (QDR) as well as Government issued Corrective Action Requests (CAR) during the previous 12 months to determine additional weak areas of concern with the prime contractor and known sub-contractors who will be participating in the availability. This information will be used in assessing the contractor-based risks associated with the availability.
- d. The PM, with the assistance of Engineering Department, will determine those work items that warrant elevated oversight to support availability certification, or which represent more significant impact to ship's operations in the event of failure. References (a), (b) and (e) will be used as an aid in this determination. Note that these references include specific requirements for the use of Controlled Work Packages (CWP) or EPCPs. The PM will provide this information to the QAS for use in preparing the QMP.
- e. In consultation with the PM as necessary, the QAS will use the information from paragraphs 4.b through 4.d to identify areas of QMP focus related to contractor performance risk and equipment criticality. Enclosure (3) will be used as an aid in evaluating a work item and determining the appropriate measures for oversight. Note that references (a) and (b) include specific requirements for the use of CWPs or EPCPs. Additionally, the QAS will consider work processes new to the prime contractor to introduce additional risk and will include this aspect in determining focus areas. These focus areas will be identified in the QMP approval letter of enclosure (1).
- f. Based on the review conducted in paragraph 4.e., the QAS will populate the Work Item Quality Management Plan of enclosure (2), with the work items from the availability work package and proposed levels of oversight. Detailed instructions for populating enclosure (2) are as follows:



- (1) In "Hull" block, enter the ship name.
- (2) In the "SSP#" block, enter the designating number for work item specification package.
- (3) In the "Work Item" column, enter each work item in the work item specification package, Ship Work Line Item Numbers (SWLIN) 100 or higher.
- (4) In the "System Design" area, place an "X" next to the work item in the reference (a) column if the work involves critical systems defined in reference (a). Place an "X" in the "Redline" column if the work involves systems identified in reference (e). If neither situation applies, leave the column entry blank.
- (5) In the "PR" area, place an "X" in corresponding EPCP or PCP column where either detailed procedure is required by the work item. NOTE: In most cases, work items indicated with an "X" in the reference (a) column will require an EPCP. Any mismatch in these circumstances should be investigated to ensure there is not an error in the work item specification.
- (6) In the "PVI" area, indicate the attributes from the current NAVSEA attribute list which will be observed through PVI, and the frequency PVI observations will be made on that work item. The observation of all specified attributes are not required for each observation; however, observations should attempt to address as many of the attributes as possible. Frequencies apply only when the work item is in active production. NAVSEA attribute lists are accessible through the NAVSEA website

<https://navsea.portal.navy.mil/hq/04/04X/04XQ/RMC/Shared%20Documents/Forms/AllItems.aspx?RootFolder=%2Fhq%2F04%2F04X%2F04XQ%2FRMC%2FShared%20Documents%2FGlobal%20PVI%20%28Surveillance%29%20Checklists&FolderCTID=0x0120008997E7DD9B0F794FB7AF6F5FE4D1EB7D&View=%7b757A0F3E-C0C9-4A37-BBC7-20126F0E37A4%7d>

- (7) In the "PE" area, indicate the attribute from the current NAVSEA attribute list which will be observed through PE, and the frequency PE observations will be made focusing on that work item. The observation of all specified attributes are not required for each observation; however, observations should attempt to address as many of the attributes as possible.

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Frequencies apply only when the work item is in active production. NAVSEA attribute list is referenced in paragraph 6 above.

(8) In the "Mandatory Oversight Only" column, place an "X" for any work items that will not be subject to oversight above and beyond those (G)-Points incorporated into the work item or associated NAVSEA Standard Item.

g. Thirty days prior to the start of the availability the QAS should then meet with the PT members (PM/Project Team Engineer/TME) to review the work items, the risks associated with each item either due to its inherent qualities, contractor weakness, or any other areas of concern that warrant modification to the initial draft of the QMP. Additional considerations, such as the potential effect of a work item on key event attainment or critical path progression, may be factored into the QMP.

h. Once populated and agreed to by the PT, enclosure (2) will be signed by the PM, Project Support Engineer and the QAS.

i. The QAS, with assistance of the RMC PM/Project Support Engineer, will prepare the QMP approval memorandum using enclosure (1) as a template.

(1) Enclosure (2) of this instruction will be included in the Approval Memorandum as an enclosure. Combined with the memorandum, this provides a composite picture of the initial QMP that is being used to guide oversight of the availability.

(2) The memorandum and enclosures should be routed to the signatory RMC department codes via email or walked-through as soon as the memorandum is prepared. An effective review will allow signature concurrence to occur conveniently in a group setting or rapid "walk-through". The PM is responsible for ensuring the QMP is submitted NLT the A-15 point prior to the start of the availability. If desired, the memorandum may be formatted for electronic signatures.

(3) The fully prepared memorandum, with enclosures, will be submitted to Code 132 for control and routing approval through the Department Heads and RMC Commanding Officer.

(4) Once submitted, the PT may implement the QMP on a preliminary basis, modifying the plan as necessary upon final approval.

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j. It is recognized that growth and new work, as well as schedule changes and cancelled work items will affect the QMP. As these changes occur, it will necessitate changes and revisions to the QMP by the PT. The PT QAS is responsible to document these changes on the Work Item QMP, enclosure (2).

(1) Change information will be entered in "Record of Changes" area of enclosure (2). Information will include the date, brief description of the change (i.e., Work item deleted, PVI attribute XX incorporated), and brief justification (i.e., RCC, CAR findings, higher authority direction).

(2) Changes to the QMP do not require approval outside the PT.

k. Using the approved enclosure (2) as a basis, the PT QAS will prepare enclosure (4) as follows:

(1) On front page, enter the ship, contract and start date information, as well as the number of weeks the availability is scheduled to last.

(2) Utilizing the imbedded instructions associated with enclosure (4), enter the appropriate information for PVI and PE in the following columns: "Assigned", "Work Item", "Frequency" and "Attribute List".

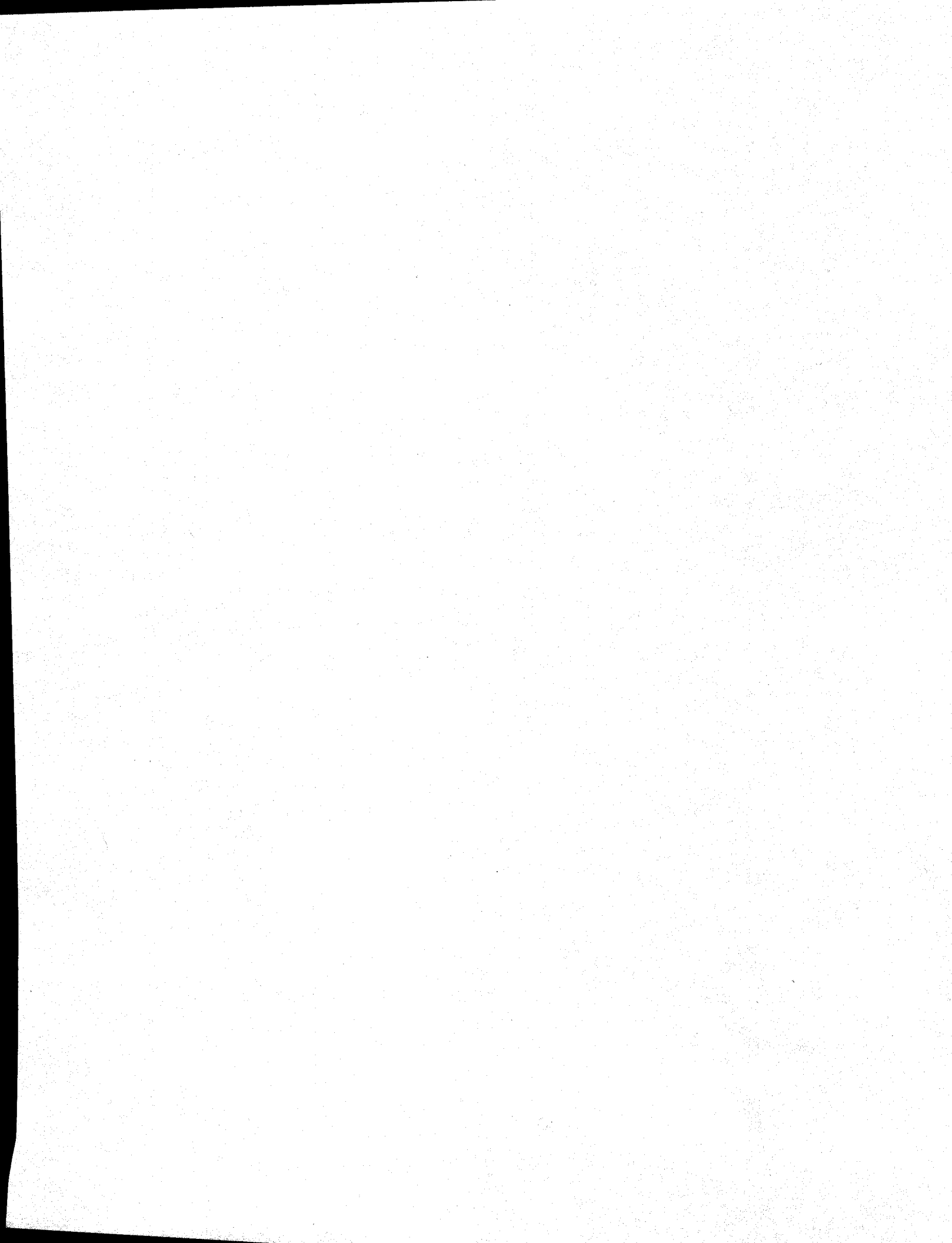
(3) When enclosure (4) has been prepared for the upcoming week, the QAS will review the schedule with the PM. The PM will distribute the weekly schedule to the PT for accomplishment.

(4) The official copy of enclosure (4) will be maintained electronically and accessible on the respective RMC's "share" drive or "portal". It will include all previously completed weeks and at least one scheduled week into the future.

1. Weekly QA Oversight Plan Execution.

(1) Assigned PVI/PE should not normally be performed in conjunction with a (G)-checkpoint but rather should be a random surveillance of the work or procedure being evaluated.

(2) When resource limitations occur, the accomplishment of required Government checkpoints will always take precedence over the accomplishment of PVI and PE.



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(3) The QAS shall:

(a) In the date PVI/PE accomplished column of enclosure (4), document the accomplishment of the PVI/PE using the month and day.

(b) Use the note column of enclosure (4) to explain any changes to the Weekly QA Plan (i.e., why a planned PVI/PE was not accomplished) or any other pertinent/useful information such as actions taken for UNSAT observations (ex. "UNSAT-corrected on the spot", "UNSAT-CAR # issued")

(c) Input the PVI/PE into the QA database within five (5) working days.

(d) Retain enclosure (4) as a permanent QA Record (saved electronically on the "share" drive).

(4) The SBS shall:

(a) Review and identify those work items they have been assigned from enclosure (4), Weekly QA Oversight Plan.

(b) Complete the PVI/PE for each work item assigned that is being actively worked by the contractor in accordance with the attribute assigned from enclosure (4).

(c) Turn in completed PVI/PE sheets daily to the QAS.

(d) Notify the QAS upon the completion of the work item.

(e) Notify the QAS of any additional items of concern.

m. The PT QAS will coordinate with Code 132 to schedule and accomplish audits of process supporting availability certification.

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6. The QMP is a tool used to plan and execute oversight of the contractor's work. All RMC representatives (QAS, TME, Project Support Engineer, etc.) are responsible for executing the assigned oversight and will be assigned various related responsibilities including PVI and PE accomplishment. The QAS is additionally responsible for administratively maintaining enclosure (2), Work Item QMP as well as enclosure (4), Weekly QA Oversight Plan during availability execution. The PM is responsible for ensuring the QMP is completed throughout the execution phase of the availability.


DAVID J. GALE

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SURFMEPP



20 Apr 12

Date: [_____]

From: [Name] Project Manager, USS [Ship Name]
To: Commanding Officer, [NSA Name]

Subj: QUALITY MANAGEMENT PLAN (QMP) for USS [Ship Name], [SSP#]

Ref: (a) NAVSEAINST 5400.108A Policy for Quality
Management of Work on Non-Nuclear Surface Ship
Critical Systems
(b) COMUSFLTFORCOMINST 4790.3 Joint Fleet Maintenance
Manual (JFMM)
(c) CNRMC ltr 4700 Ser C200/XXX of DDMMYY, Availability
Quality Management Plan SOP

Encl: (1) Work Item Quality Management Plan
(2) List of Exceptions [Optional in lieu of including in
the memorandum body]

1. This memorandum documents the accomplishment, plans for execution, and establishes responsibilities for completion of the Quality Management Plan (QMP) for the [Type] availability on USS [Ship Name]. It includes the actions to implement an effective availability QMP as defined in references (a) through (c).

2. In preparation for the subject availability, RMC audit of the Prime Contractor's Quality Maintenance System (QMS) was confirmed to be within periodicity and outstanding corrective actions were reviewed. As a result, RMC (Code 132) reports the following concerns for the subject availability:

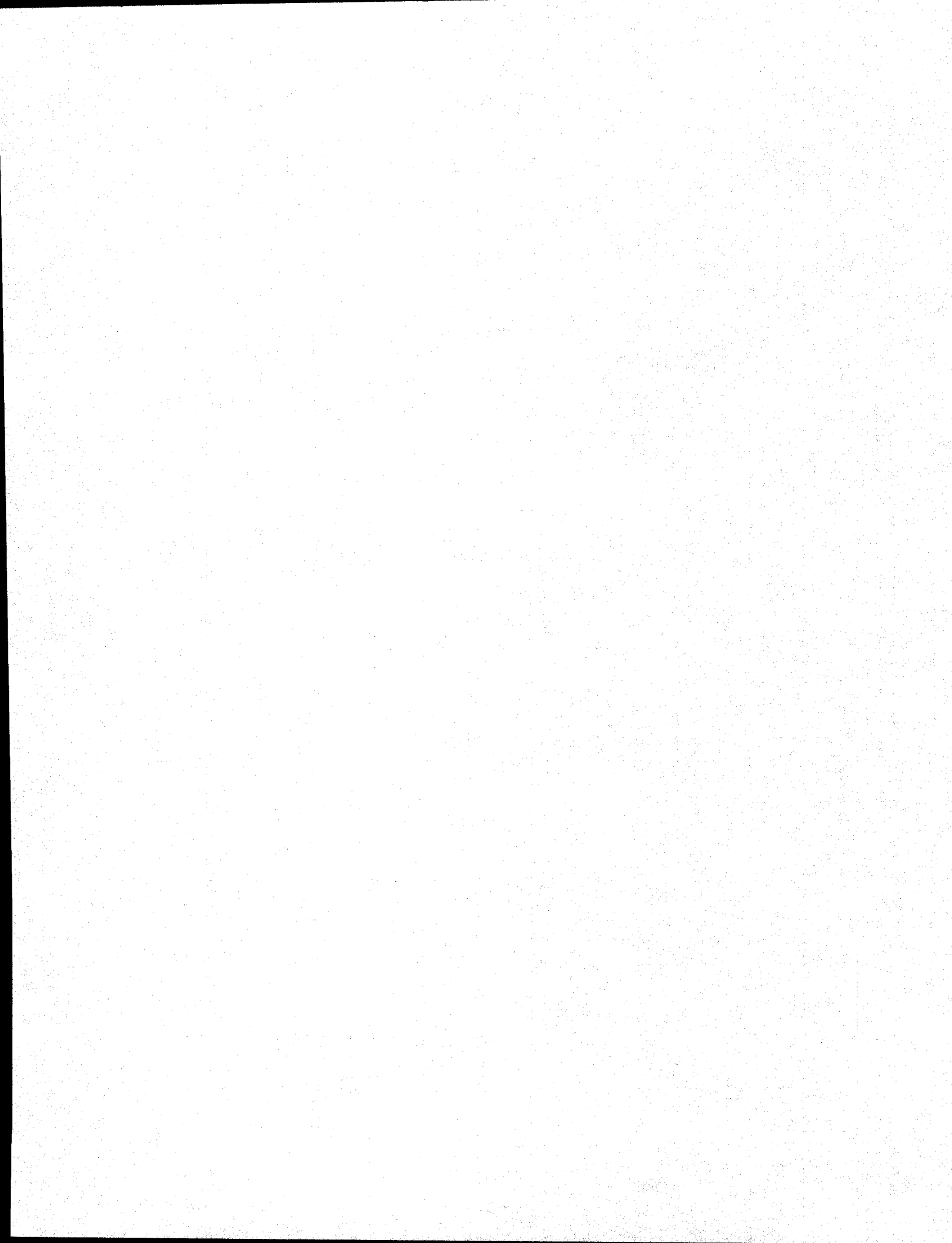
- a. [List and discuss the concerns. Effect on Enclosure 1]
- b. [List and discuss the concerns. Effect on Enclosure 1]

3. In preparation for the subject availability, the last four (4) quarters of available Quality Deficiency Evaluations (QDE) and Government-issued Corrective Action Requests (CAR) were reviewed. As a result, RMC (Code 131) reports the following concerns for the subject availability:

- a. [List and discuss the concerns. Effect on Enclosure 1]
- b. [List and discuss the concerns. Effect on Enclosure 1]

Enclosure (1)

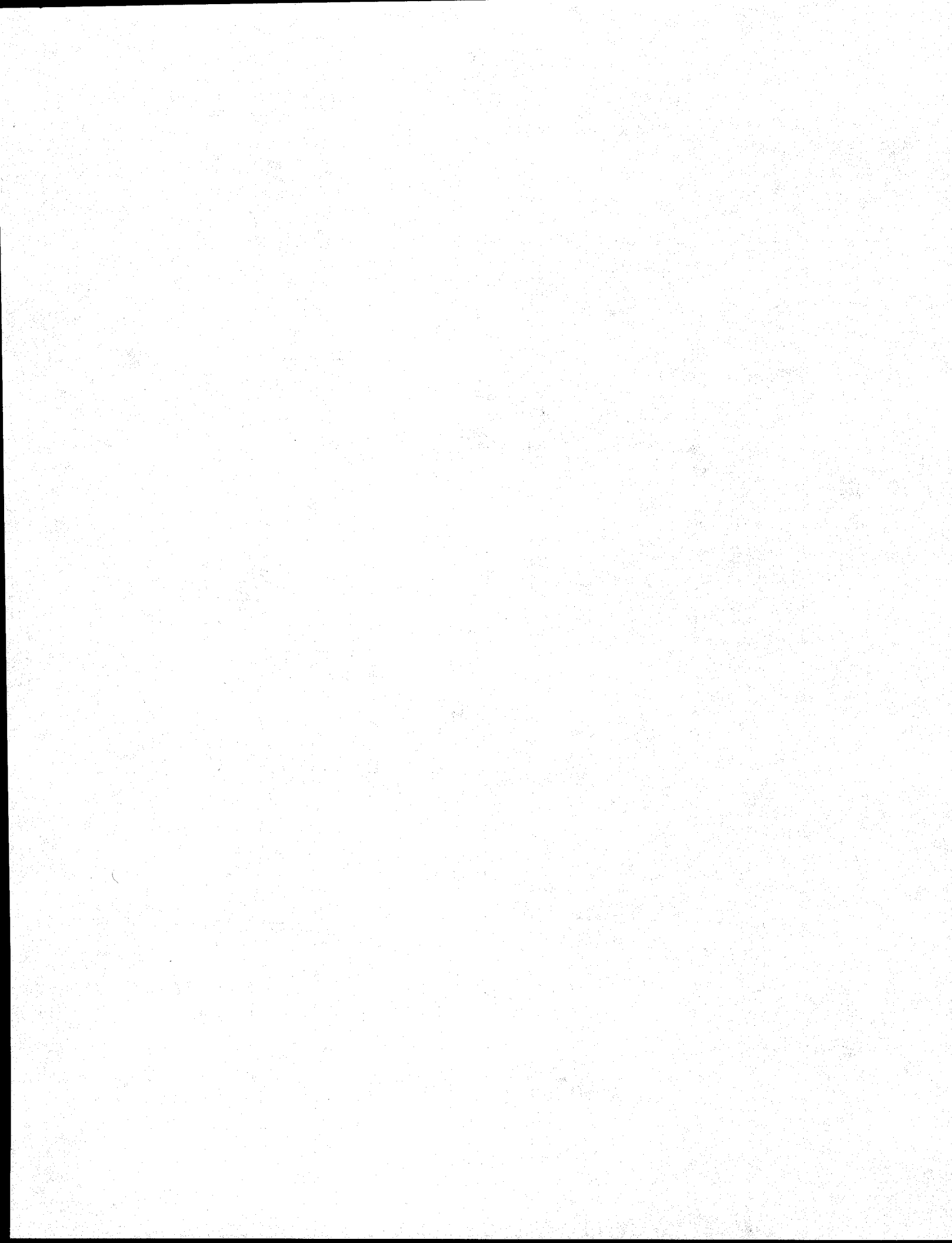




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Non-Mandatory Contractor Oversight

Work Item Evaluation Matrix	Methods of Oversight	KTR QDE Deficiency	Low KTR OR SUB-KTR Experience	No Equip Redundancy	2X Equip Redundancy	>2X Equip Redundancy	Always
Type of Work							
5400.108A Crit System	EPCP						X
	PVI						X
	PE						X
	Audit -NMD						
	Audit -T&I						
(Occurs with EPCP closeout)	Audit-OQE						X
Redline System	PVI	X	X	X	X		
	PE		X				
	Audit -NMD				X		
	Audit -T&I			X			
	Audit-OQE		X				
Critical Path Work	PVI	X	X				
	PE		X				
	Audit -NMD						
	Audit -T&I			X	X		
	Audit-OQE						
Undocking KE Work	PVI	X	X				
	PE		X				
	Audit -NMD						X
	Audit-T&I						X
	Audit-OQE						
Other Work	PVI	X	X				
	PE		X				
	Audit -NMD						
	Audit-T&I						
	Audit-OQE						



Name and Hull Number of Vessel:

USS SHIP's NAME (XXXX-7)

Contract Number:

SSP #

Date of 1st Sunday in Avail

January 1, 2012

Number of Weeks:

52

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PVI/PE Assignment Pages

Week 1	1/1/2012	<u>PVI</u>	<u>PE</u>
Week 2	1/8/2012	<u>PVI</u>	<u>PE</u>
Week 3	1/15/2012	<u>PVI</u>	<u>PE</u>
Week 4	1/22/2012	<u>PVI</u>	<u>PE</u>
Week 5	1/29/2012	<u>PVI</u>	<u>PE</u>
Week 6	2/5/2012	<u>PVI</u>	<u>PE</u>
Week 7	2/12/2012	<u>PVI</u>	<u>PE</u>
Week 8	2/19/2012	<u>PVI</u>	<u>PE</u>
Week 9	2/26/2012	<u>PVI</u>	<u>PE</u>
Week 10	3/4/2012	<u>PVI</u>	<u>PE</u>
Week 11	3/11/2012	<u>PVI</u>	<u>PE</u>
Week 12	3/18/2012	<u>PVI</u>	<u>PE</u>
Week 13	3/25/2012	<u>PVI</u>	<u>PE</u>
Week 14	4/1/2012	<u>PVI</u>	<u>PE</u>
Week 15	4/8/2012	<u>PVI</u>	<u>PE</u>
Week 16	4/15/2012	<u>PVI</u>	<u>PE</u>
Week 17	4/22/2012	<u>PVI</u>	<u>PE</u>
Week 18	4/29/2012	<u>PVI</u>	<u>PE</u>
Week 19	5/6/2012	<u>PVI</u>	<u>PE</u>
Week 20	5/13/2012	<u>PVI</u>	<u>PE</u>
Week 21	5/20/2012	<u>PVI</u>	<u>PE</u>
Week 22	5/27/2012	<u>PVI</u>	<u>PE</u>
Week 23	6/3/2012	<u>PVI</u>	<u>PE</u>
Week 24	6/10/2012	<u>PVI</u>	<u>PE</u>
Week 25	6/17/2012	<u>PVI</u>	<u>PE</u>
Week 26	6/24/2012	<u>PVI</u>	<u>PE</u>

PVI/PE Assignment Pages

Week 27	7/1/2012	<u>PVI</u>	<u>PE</u>
Week 28	7/8/2012	<u>PVI</u>	<u>PE</u>
Week 29	7/15/2012	<u>PVI</u>	<u>PE</u>
Week 30	7/22/2012	<u>PVI</u>	<u>PE</u>
Week 31	7/29/2012	<u>PVI</u>	<u>PE</u>
Week 32	8/5/2012	<u>PVI</u>	<u>PE</u>
Week 33	8/12/2012	<u>PVI</u>	<u>PE</u>
Week 34	8/19/2012	<u>PVI</u>	<u>PE</u>
Week 35	8/26/2012	<u>PVI</u>	<u>PE</u>
Week 36	9/2/2012	<u>PVI</u>	<u>PE</u>
Week 37	9/9/2012	<u>PVI</u>	<u>PE</u>
Week 38	9/16/2012	<u>PVI</u>	<u>PE</u>
Week 39	9/23/2012	<u>PVI</u>	<u>PE</u>
Week 40	9/30/2012	<u>PVI</u>	<u>PE</u>
Week 41	10/7/2012	<u>PVI</u>	<u>PE</u>
Week 42	10/14/2012	<u>PVI</u>	<u>PE</u>
Week 43	10/21/2012	<u>PVI</u>	<u>PE</u>
Week 44	10/28/2012	<u>PVI</u>	<u>PE</u>
Week 45	11/4/2012	<u>PVI</u>	<u>PE</u>
Week 46	11/11/2012	<u>PVI</u>	<u>PE</u>
Week 47	11/18/2012	<u>PVI</u>	<u>PE</u>
Week 48	11/25/2012	<u>PVI</u>	<u>PE</u>
Week 49	12/2/2012	<u>PVI</u>	<u>PE</u>
Week 50	12/9/2012	<u>PVI</u>	<u>PE</u>
Week 51	12/16/2012	<u>PVI</u>	<u>PE</u>
Week 52	12/23/2012	<u>PVI</u>	<u>PE</u>

