



**DEPARTMENT OF THE NAVY**  
COMMANDER, NAVY INSTALLATIONS COMMAND  
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CNICINST 5090.1  
N4  
4 Feb 2013

CNIC INSTRUCTION 5090.1

From: Commander, Navy Installations Command

Subj: U.S. DRINKING WATER QUALITY STANDARDS FOR U.S. NAVY  
INSTALLATIONS OVERSEAS

Ref: (a) Safe Drinking Water Act of 1974  
(b) NAVIG Summary Report, Overseas Potable Water Systems,  
January 2009  
(c) SECNAV memo, Overseas Potable Water Systems, 28  
January 2008  
(d) CNO memo, Overseas Potable Water Systems, 1 April  
2009  
(e) OPNAVINST 5090.1  
(f) Public Health Services Act of 1944  
(g) SECNAV M-5210.1

Encl: (1) List of Subparts of the National Primary Drinking  
Water Regulations (40 CFR 141) Adopted Through This  
Instruction

1. Purpose. To publish instructions, identify roles and responsibilities, and set requirements for drinking water at overseas United States (U.S.) Navy installations. In order to set the criteria for meeting U.S. drinking water quality standards, the Navy's Executive Agent for Drinking Water Ashore, Commander, Naval Installations Command (CNIC), hereby adopts the National Primary Drinking Water Regulations (40 CFR 141) promulgated under reference (a), the Safe Drinking Water Act of 1974, as described in this document as the standard for overseas installations to meet or exceed.

2. Background

a. In January of 2009, the Naval Inspector General (NAVIG) published reference (b) in which multiple potable water concerns were identified, including but not limited to: the quality of drinking water at overseas Navy installations, drinking water system operation, maintenance, operator training, oversight, and existing standards. In response, the Secretary of the Navy

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(SECNAV) issued reference (c) regarding overseas potable water systems. Reference (d) states that drinking water at overseas U.S. Navy installations must meet or exceed U.S. drinking water quality standards.

b. This instruction promulgates a clear standard, able to be implemented overseas, that meets SECNAV and Chief of Naval Operations (CNO) direction and fills latency gaps that exist in reference (e), with the Overseas Environmental Baseline Guidance Document (OEBGD), and in host nation final governing standards (FGS). The instruction also ensures that, as changes occur to U.S. standards, overseas Navy installations are subject to the changes. The Navy's Overseas Water Quality Oversight Council (WQOC) will monitor future changes to U.S. drinking water standards and communicate to overseas Navy installations if future gaps are identified. Subsequently a revised overseas standard will be submitted to CNIC for formal promulgation.

c. This instruction adopts U.S. primary drinking water regulations pursuant to section 1412 of reference (f), the Public Health Services Act of 1944, as amended by reference (a), and related regulations, as the U.S. standards applicable to all U.S. Navy installations overseas.

d. The information listed in this document applies to all U.S. Navy installations overseas that may include non-contiguous property that the installation Commanding Officer (CO) considers to be a part of the installation.

### 3. Policy

a. The U.S. standards listed in this instruction do not replace requirements already in place. Overseas installations must continue to meet environmental FGS and other applicable requirements, such as the OEBGD, international agreements, in-theater Commander Directives, and Department of Defense (DoD) and service policies as applicable. If an FGS or other requirement requires testing of a contaminant also required by the U.S. standards, only one test is required to be conducted; that is, one sample can report the contaminant level for one or more standards. The testing must comply with both requirements for testing methodology.

b. This instruction adopts several subparts of the National Primary Drinking Water Regulations (40 CFR 141) as outlined in reference (a) as the U.S. drinking water standards applicable to

U.S. Navy installations overseas and all overseas drinking water systems on overseas Navy installations. Where "the State" is referenced in these standards, for purposes of the Navy Overseas Drinking Water Program, the term shall refer to the Regional Water Quality Board (RWQB). However, it should be noted that, unlike the State, the RWQB does not have primacy and must coordinate and seek input and approval from the Water Quality Oversight Council (WQOC) for all risk-based decisions resulting from implementing this instruction. Additionally, purchased water shall be subject to the same monitoring requirements as DoD-produced water and should comply with the monitoring requirements as stated in this instruction. Compliance dates cited in these subparts are not applicable, and the WQOC should be consulted for relevant compliance dates. Enclosure (1) outlines the specific subparts of the National Primary Drinking Water Regulations (40 CFR 141) in accordance with reference (a) that this instruction adopts; the direction provided therein should be adopted except where further direction is provided within the enclosure.

#### 4. Responsibilities

a. CNIC and its subordinate commands are responsible for ensuring compliance with and programming and budgeting for this instruction.

b. Region Commanders (REGCOMs) are responsible for:

(1) Disseminating this instruction to the RWQB in their area of responsibility (AOR).

(2) Overseeing installation implementation of and compliance with this instruction.

(3) Programming and budgeting for requirements to comply with this instruction.

c. Installation COs of overseas installations are responsible for establishing installation WQBs (IWQBs) under their chairmanship to implement and comply with this instruction and communicating drinking water issues to the RWQB and the WQOC.

d. Navy Overseas Water Quality Oversight Council (WQOC) is responsible for monitoring future changes to U.S. drinking water standards applicable to Navy personnel at installations in the United States and applying them to Navy installations overseas.

e. Naval Facilities Engineering Command (NAVFAC) facility engineering commands (FECs) are responsible for complying with and executing this instruction in collaboration with IWQBs, RWQBs, and the WQOC.

5. Action

a. CNIC HQ shall:

(1) Serve as the Executive Agent (EA) for drinking water ashore as it pertains to enforcing this instruction. The EA retains the authority to provide additional guidance and interpretation as well as to update this instruction.

(2) Oversee implementation and compliance with this instruction via the WQOC.

(3) Provide to the Vice Chief of Naval Operations (VCNO) an annual report demonstrating compliance with this instruction.

(4) Evaluate compliance with this instruction through external audits beginning 1 year from the issuance of this instruction.

b. REGCOMs shall:

(1) Ensure implementation and compliance with this instruction via the RWQB. RWQB should utilize the WQOC to seek guidance for situations encountered in the implementation of this instruction that appear to conflict with other Navy or DoD guidance or that appear prohibitively costly or physically impossible to implement.

(2) Plan, program, and budget for requirements to comply with this instruction.

(3) Demonstrate progress toward complying with this instruction to the WQOC through quarterly dashboard submissions.

(4) Evaluate installation compliance with this instruction through their internal annual Environmental Management System/Environmental Quality Assessment (EMS/EQA) audits and external triennial audits, beginning 1 year from the issuance of this instruction.

c. Installation COs shall:

(1) Ensure implementation and compliance with this instruction via the IWQB, and utilize the IWQB to seek guidance and clarification from the RWQB in efforts to implement this instruction.

(2) Implement and comply with this instruction via the IWQB in collaboration with NAVFAC and Navy Bureau of Medicine and Surgery (BUMED), in accordance with BUMED instruction (BUMEDINST) 6240 (series).

(3) Utilize the IWQB to submit installation standard monitoring plans, system specific study plans, and 40/30 certifications (issued by the RWQB) to the RWQB or WQOC within 1 year of the publication of this instruction.

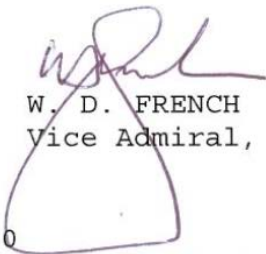
(4) Ensure that installations complete standard monitoring studies or system-specific studies within 1 year of submittal of the plans to the RWQB or WQOC, and submit Initial Distribution System Evaluations to the RWQB or WQOC within 3 months of completion of the studies.

(5) Demonstrate progress toward complying with this instruction to the RWQB through quarterly dashboard submissions.

(6) Evaluate compliance with this instruction through internal EMS/EQA audits beginning 1 year after the issuance of this instruction.

(7) Document compliance with this instruction utilizing the Navy Overseas Drinking Water Database.

6. Records Management. Records created as a result of this instruction, regardless of media and format, shall be managed in accordance with reference (g) and uploaded to the Navy Overseas Drinking Water Database.



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Vice Admiral, U.S. Navy

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**LIST OF SUBPARTS OF 40 CFR 141 ADOPTED THROUGH THIS INSTRUCTION**

1. Subpart A, General: 40 CFR 141.2 - Definitions. References to "the State" are taken to mean "RWQB" as stated elsewhere in the instruction.
2. Subpart B, Maximum Contaminant Levels
  - a. 40 CFR 141.11 - Maximum contaminant levels for inorganic chemicals
  - b. 40 CFR 141.13 - Maximum contaminant levels for turbidity
3. Subpart C, Monitoring and Analytical Requirements
  - a. 40 CFR 141.21 - Coliform sampling
  - b. 40 CFR 141.22 - Turbidity sampling and analytical requirements
  - c. 40 CFR 141.23 - Inorganic chemical sampling and analytical requirements
  - d. 40 CFR 141.24 - Organic chemicals, sampling and analytical requirements
  - e. 40 CFR 141.25 - Analytical methods for radioactivity
  - f. 40 CFR 141.26 - Monitoring frequency for radioactivity in community water systems
  - g. 40 CFR 141.27 - Alternate analytical techniques
  - h. Appendix A - Alternative Testing Methods Approved for Analyses Under the Safe Drinking Water Act
4. Subpart D, Reporting and Recordkeeping
  - a. 40 CFR 141.33 - Record Maintenance
5. Subpart E, Special Regulations, Including Monitoring Regulations and Prohibition on Lead Use
  - a. 40 CFR 141.41 - Special monitoring for sodium
  - b. 40 CFR 141.42 - Special monitoring for corrosivity characteristics
  - c. 40 CFR 141.43 - Prohibition on use of lead pipes, solder, and flux
6. Subpart G, National Revised Primary Drinking Water Regulations: Maximum Contaminant Levels and Maximum Residual Disinfectant Levels
  - a. 40 CFR 141.60 - Effective dates

- b. 40 CFR 141.61 - Maximum contaminant levels for organic contaminants
- c. 40 CFR 141.62 - Maximum contaminant levels for inorganic contaminants
- d. 40 CFR 141.63 - Maximum contaminant levels (MCLs) for microbiological contaminants
- e. 40 CFR 141.64 - Maximum contaminant levels for disinfection byproducts
- f. 40 CFR 141.65 - Maximum residual disinfectant levels
- g. 40 CFR 141.66 - Maximum contaminant levels for radionuclides

7. Subpart H, Filtration and Disinfection

- a. 40 CFR 141.70 - General requirements
- b. 40 CFR 141.71 - Criteria for avoiding filtration
- c. 40 CFR 141.72 - Disinfection
- d. 40 CFR 141.73 - Filtration
- e. 40 CFR 141.74 - Analytical and monitoring requirements
- f. 40 CFR 141.75 - Reporting and recordkeeping requirements
- g. 40 CFR 141.76 - Recycle provisions

8. Subpart I, Control of Lead and Copper

- a. 40 CFR 141.80 - General requirements
- b. 40 CFR 141.81 - Applicability of corrosion control treatment steps to small, medium-size and large water systems
- c. 40 CFR 141.82 - Description of corrosion control treatment requirements
- d. 40 CFR 141.83 - Source water treatment requirements
- e. 40 CFR 141.84 - Lead service line replacement requirements
- f. 40 CFR 141.85 - Public education and supplemental monitoring requirements
- g. 40 CFR 141.86 - Monitoring requirements for lead and copper in tap water
- h. 40 CFR 141.87 - Monitoring requirements for water quality parameters
- i. 40 CFR 141.88 - Monitoring requirements for lead and copper in source water
- j. 40 CFR 141.89 - Analytical methods
- k. 40 CFR 141.90 - Reporting requirements
- l. 40 CFR 141.91 - Recordkeeping requirements

9. Subpart J, Use of Non-centralized Treatment Devices

- a. 40 CFR 141.100 - Criteria and procedures for public water systems using point-of-entry devices
- b. 40 CFR 141.101 - Use of bottled water

10. Subpart K, Treatment Techniques

- a. 40 CFR 141.110 - General requirements
- b. 40 CFR 141.1111 - Treatment techniques for acrylamide and epichlorohydrin

11. Subpart L, Disinfectant Residuals, Disinfection Byproducts, and Disinfection Byproduct Precursors

- a. 40 CFR 141.130 - General requirements
- b. 40 CFR 141.131 - Analytical requirements
- c. 40 CFR 141.132 - Monitoring requirements
- d. 40 CFR 141.133 - Compliance requirements
- e. 40 CFR 141.134 - Reporting and recordkeeping requirements
- f. 40 CFR 141.135 - Treatment technique for control of disinfection byproduct (DBP) precursors

12. Subpart P, Enhanced Filtration and Disinfection--Systems Serving 10,000 or More People

- a. 40 CFR 141.170 - General requirements
- b. 40 CFR 141.171 - Criteria for avoiding filtration
- c. 40 CFR 141.172 - Disinfection profiling and benchmarking
- d. 40 CFR 141.173 - Filtration
- e. 40 CFR 141.174 - Filtration sampling requirements
- f. 40 CFR 141.175 - Reporting and recordkeeping requirements

13. Subpart S, Ground Water Rule

- a. 40 CFR 141.400 - General requirements and applicability
- b. 40 CFR 141.401 - Sanitary surveys for ground water systems
- c. 40 CFR 141.402 - Ground water source microbial monitoring and analytical methods
- d. 40 CFR 141.403 - Treatment technique requirements for ground water systems
- e. 40 CFR 141.404 - Treatment technique violations for ground water systems
- f. 40 CFR 141.405 - Reporting and recordkeeping for ground water systems



14. Subpart T, Enhanced Filtration and Disinfection--Systems Serving Fewer than 10,000 People
- a. General Requirements
    - (1) 40 CFR 141.500 - General requirements
    - (2) 40 CFR 141.501 - Who is subject to the requirements of subpart T?
    - (3) 40 CFR 141.502 - When must my system comply with these requirements?
    - (4) 40 CFR 141.503 - What does subpart T require?
  - b. Finished Water Reservoirs
    - (1) 40 CFR 141.510 - Is my system subject to the new finished water reservoir requirements?
    - (2) 40 CFR 141.511 - What is required of new finished water reservoirs?
  - c. Additional Watershed Control Requirements for Unfiltered Systems
    - (1) 40 CFR 141.520 - Is my system subject to the updated watershed control requirements?
    - (2) 40 CFR 141.521 - What updated watershed control requirements must my unfiltered system implement to continue to avoid filtration?
    - (3) 40 CFR 141.522 - How does the State determine whether my system's watershed control requirements are adequate?
      - (a) The Installation Water Quality Board (IWQB) shall make this determination if applicable with assistance from the Region WQB (RWQB) who reports the decision to the Water Quality Oversight Council (WQOC).
      - (b) Upon request, the WQOC will provide guidance to the Regional Water Quality Boards (RWQBs).
  - d. Disinfection Profile
    - (1) 40 CFR 141.530 - What is a disinfection profile and who must develop one?
    - (2) 40 CFR 141.531 - What criteria must a State use to determine that a profile is unnecessary?
      - (a) The IWQB shall make this determination if applicable, with assistance from the RWQB who reports the decision to the WQOC.
      - (b) Upon request, the WQOC will provide guidance to the RWQB.
    - (3) 40 CFR 141.532 - How does my system develop a disinfection profile and when must it begin?
    - (4) 40 CFR 141.533 - What data must my system collect to calculate a disinfection profile?
    - (5) 40 CFR 141.534 - How does my system use this data to

- calculate an inactivation ratio?
- (6) 40 CFR 141.535 - What if my system uses chloramines, ozone, or chlorine dioxide for primary disinfection?
  - (7) 40 CFR 141.536 - My system has developed an inactivation ratio; what must we do now?
- e. Disinfection Benchmark
- (1) 40 CFR 141.540 - Who has to develop a disinfection benchmark?
  - (2) 40 CFR 141.541 - What are significant changes to disinfection practice?
  - (3) 40 CFR 141.542 - What must my system do if we are considering a significant change to disinfection practices?
  - (4) 40 CFR 141.543 - How is the disinfection benchmark calculated?
  - (5) 40 CFR 141.544 - What if my system uses chloramines, ozone, or chlorine dioxide for primary disinfections?
- f. Combined Filter Effluent Requirements
- (1) 40 CFR 141.550 - Is my system required to meet subpart T combined filter effluent turbidity limits?
  - (2) 40 CFR 141.551 - What strengthened combined filter effluent turbidity limits must my system meet?
  - (3) 40 CFR 141.552 - My system consists of "alternative filtration" and is required to conduct a demonstration--what is required of my system and how does the State establish my turbidity limits?
    - (a) The IWQB shall make this determination if applicable with assistance from the RWQB who reports the decision to the WQOC.
    - (b) Upon request, the WQOC will provide guidance to the RWQB.
  - (4) 40 CFR 141.553 - My system practices lime softening --is there any special provision regarding my combined filter effluent?
- g. Individual Filter Turbidity Requirements
- (1) 40 CFR 141.560 - Is my system subject to individual filter turbidity requirements?
  - (2) 40 CFR 141.561 - What happens if my system's turbidity monitoring equipment fails?
  - (3) 40 CFR 141.562 - My system only has two or fewer Filters--is there any special provision regarding individual filter turbidity monitoring?
  - (4) 40 CFR 141.563 - What follow-up action is my system required to take based on continuous turbidity monitoring?
  - (5) 40 CFR 141.564 - My system practices lime softening--is there any special provision regarding my

- individual filter turbidity monitoring?
- h. Reporting and Recordkeeping
- (1) 40 CFR 141.570 - What does subpart T require that my system report to the State?
    - (a) For Navy overseas installations, this information shall be recorded and maintained by the installation.
    - (b) For Navy overseas installations, this information shall reported to the RWQB and WQOC as otherwise required.
  - (2) 40 CFR 141.571 - What records does subpart T require my system to keep?
    - (a) The IWQB shall input all compliance data, reports, and operational records into the Navy Overseas Drinking Water Database.
    - (b) The IWQB shall retain all compliance data, reports, and operational records for a period of time specified in this section.

15. Subpart U, Initial Distribution System Evaluations

- a. 40 CFR 141.600 - General requirements
- b. 40 CFR 141.601 - Standard monitoring
- c. 40 CFR 141.602 - System specific studies
- d. 40 CFR 141.603 - 40/30 certification
- e. 40 CFR 141.605 - Subpart V compliance monitoring location recommendations

16. Subpart V, Stage 2 Disinfection Byproducts Requirements

- a. 40 CFR 141.620 - General requirements
- b. 40 CFR 141.621 - Routine monitoring
- c. 40 CFR 141.622 - Subpart V monitoring plan
- d. 40 CFR 141.623 - Reduced monitoring
- e. 40 CFR 141.624 - Additional requirements for consecutive systems
- f. 40 CFR 141.625 - Conditions requiring increased monitoring
- g. 40 CFR 141.626 - Operational evaluation levels
- h. 40 CFR 141.627 - Requirements for remaining on reduced TTHM and HAA5 monitoring based on subpart L results
- i. 40 CFR 141.628 - Requirements for remaining on increased TTHM and HAA5 monitoring based on subpart L results
- j. 40 CFR 141.629 - Reporting and recordkeeping requirements

17. Subpart W, Enhanced Treatment for Cryptosporidium

- a. General Requirements
  - (1) 40 CFR 141.700 - General requirements
- b. Source Water Monitoring Requirements
  - (1) 40 CFR 141.701 - Source water monitoring
  - (2) 40 CFR 141.703 - Sampling locations
  - (3) 40 CFR 141.704 - Analytical methods
  - (4) 40 CFR 141.706 - Reporting source water monitoring results
  - (5) 40 CFR 141.707 - Grandfathering previously collected data
- c. Disinfection Profiling and Benchmarking Requirements
  - (1) 40 CFR 141.708 - Requirements when making a significant change in disinfection practice
  - (2) 40 CFR 141.709 - Developing the disinfection profile and benchmark
- d. Treatment Technique Requirements
  - (1) 40 CFR 141.710 - Bin classification for filtered systems
  - (2) 40 CFR 141.711 - Filtered system additional *Cryptosporidium* treatment requirements
  - (3) 40 CFR 141.712 - Unfiltered system *Cryptosporidium* treatment requirements
  - (4) 40 CFR 141.714 - Requirements for uncovered finished water storage facilities
- e. Requirements for Microbial Toolbox Requirements
  - (1) 40 CFR 141.715 - Microbial toolbox options for meeting *Cryptosporidium* treatment requirements
  - (2) 40 CFR 141.716 - Source toolbox components
  - (3) 40 CFR 141.717 - Pre-filtration treatment toolbox components
  - (4) 40 CFR 141.718 - Treatment performance toolbox components
  - (5) 40 CFR 141.719 - Additional filtration toolbox components
  - (6) 40 CFR 141.720 - Inactivation toolbox components
- f. Reporting and Recordkeeping Requirements
  - (1) 40 CFR 141.721 - Reporting requirements
  - (2) 40 CFR 141.722 - Recordkeeping requirements
- g. Requirements for Sanitary Surveys Performed by the Environmental Protection Agency (EPA)
  - (1) 40 CFR 141.723 - Requirements to respond to significant deficiencies identified in sanitary surveys performed by EPA