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COMMANDER NAVY INSTALLATIONS COMMAND
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CNICINST 5090.6A
N4
8 July 2024

CNIC INSTRUCTION 5090.6A

From: Commander, Navy Installations Command

Subj: NAVY SAMPLING AND TESTING FOR LEAD IN DRINKING WATER IN PRIORITY AREAS

Ref: (a) OPNAV M-5090.1
(b) 42 U.S.C. § 300f et seq.
(c) EPA 815-B-18-007, Training, Testing and Taking Action for Reducing Lead in Drinking Water in Schools and Child Care Facilities Revised Manual of Oct 2018
(d) Unified Facilities Guide Specifications 22-00-00 of 1 Nov 2015

Encl: (1) Drinking Water Sampling for Lead Procedures and Timeline
(2) Sample Identification Format
(3) Secured Outlet Sign
(4) Sampling Strategy Flowchart
(5) Pipe Volume Table
(6) List of Internal and External Stakeholders

1. Purpose

a. To issue policy, responsibilities, and procedures for implementing requirements to conduct testing for lead in drinking water per reference (a).

b. This instruction cancels CNIC Instruction 5090.6 and is a substantial revision that should be read in its entirety. Significant changes were made to clarify sampling requirements and processes for lead in drinking water in priority areas, roles and responsibilities, reporting and notification requirements, and applicability. Specifically, this instruction revision:

(1) Lowers the lead screening level for which corrective action is required from 15 parts per billion (ppb) to 10 ppb to align with the U.S. Environmental Protection Agency's (EPA) Lead and Copper Rule (LCR) trigger level and forthcoming new action level proposed in revisions to the LCR.

(2) Requires a baseline sampling event for all plumbing modifications and new fixtures, regardless of lead-free certification status.

(3) Requires use of certified and approved laboratories for lead sample analysis.

(4) Updates notification letter templates, to include a new optional letter template to notify staff and parents of initial sample results above the 10 ppb screening level prior to the required follow-up flush sampling and an optional region briefing card template.

(5) Clarifies annual results reporting requirements to Commander, Navy Installations Command (CNIC) headquarters (HQ).

(6) Extends the sampling procedure timeline based on lessons learned to more accurately account for the average amount of time between sampling and when results are received from the laboratory conducting analysis.

(7) Requires CNIC Fleet and Family Readiness (N9) to maintain awareness of this instruction as it pertains to their facilities, and Region N9s and Installation N9s to coordinate with Public Affairs and Public Works staff as necessary for notifications and corrective actions at any N9 facilities.

(8) Clarifies that the instruction does not apply to any priority areas that are not owned or managed by the Navy or the Department of Defense.

(9) Provides additional guidance and clarification on sampling procedures including follow-up flush samples, passivation of new plumbing components, and securing affected outlets.

2. Cancellation. CNICINST 5090.6.

3. Scope and Applicability. This instruction applies to CNIC HQ, Regions, Installations, tenant activities, facilities, and components that meet the definition of a priority area in reference (a). Priority areas are defined as primary and secondary schools (i.e., Child Development Centers (CDC), School Age Care programs (SAC), Navy-operated 24/7 group homes and youth program facilities). This instruction does not extend to on or off-base residences (e.g., Child Development Homes (CDH) or Family Child Care Homes) used for childcare purposes under Navy's Child Development Home program, or any priority areas that are not owned or managed by the Navy or the Department of Defense.

4. Policy. The testing protocols of this instruction are pursuant to reference (a), exceed safe drinking water requirements in reference (b) and U.S. EPA LCR regulations, and are based on technical, not regulatory, guidance published by the EPA in reference (c).

a. Testing Frequency

(1) Per reference (a), testing is required at least every five years for all drinking water fountains (bubbler and water cooler-style) and outlets in priority areas to determine the presence of lead.

(2) Per reference (a), testing is required for new construction and plumbing modifications of priority areas prior to occupancy to determine the presence of lead. For modifications identified in already occupied facilities, affected outlets must be secured and testing conducted immediately. Detailed requirements on new construction and modifications are outlined further in subparagraphs 4.j. and 4.k.

b. Communication Plan

(1) The goal of communication plans is to inform stakeholders of the proactive steps and sampling plan being implemented by the Shore Enterprise to test drinking water at all Navy priority areas and share the results with stakeholders and interested parties.

(2) Before conducting sampling, installations will have a risk communication plan prepared and coordinated with internal stakeholders and interested parties.

(3) Enclosure (1) provides an example schedule of drinking water sampling for lead that will assist with coordination steps. The schedule in enclosure (1) includes three major tasks: preparation, sampling, and corrective action. Each major task will include notification and coordination with all stakeholders and interested parties.

(4) The “Staff, Parent, and Caregiver Sampling Program Announcement Letter” (subparagraph 8.c.(1)) must be issued prior to sampling in order to notify staff and parents. Minor modifications can be made to customize the letter as appropriate; however, all notification letters must be reviewed and approved by the Navy and Marine Corps Force Health Protection Command (NMCFHPC) prior to issuance. With concurrence from the installation Preventive Medicine Authority (PMA), the letter will be signed by the Installation Commanding Officer (ICO) and distributed to the parents, staff, and the installation and region public affairs officers (PAO).

c. Sampling Plan

(1) Walkthrough and facility interview. Installations will schedule a meeting with facilities directors (e.g., CDC, SAC, or CDH directors), and conduct walkthroughs of priority areas to identify sampling locations. Use the Facility Interview Form (subparagraph 8.a.) to obtain the following information:

(a) Time facility closes. Outlets should be secured after the facility closes the day before sampling. Water should not be used for 8-18 hours prior to sampling. The 8-18 hour holding time is not applicable to 24/7 facilities. At 24/7 facilities, the sample will be collected during the period of lowest projected use.

(b) Time facility opens. Facility staff may need to adjust their schedules and report earlier to ensure sampling is completed before parents and children arrive and before any water is used (including toilets and outlets that are not sampling locations). 24/7 facilities should be sampled early in the morning, as the lowest use patterns are typically overnight.

(c) Building Manager point of contact. In the event testing results are above the recommended screening level of 10 ppb, coordination with the building manager is required to clean aerators and to perform any other required corrective actions. Because resampling of the affected outlets is expected immediately, it is important to have the building manager contact information beforehand.

(d) Facility floor plan. Request a facility floor plan. If possible, use the floor plan and location identifications (ID) from previous Lead in Drinking Water in Priority Areas (LIPA) surveys. If no floor plan is available, verify if the building has an Emergency Evacuation Plan that can be used. Otherwise, develop a floor plan to identify each outlet location.

(e) Inventory of sampling locations. Outlets in priority areas required for sampling are defined in reference (a), which include:

1. Drinking fountains, both bubbler and water-cooler style, indoor, and outdoor (e.g., playgrounds, sports fields).

2. Kitchen sinks.

3. Home economic room sinks.

4. Teacher's lounge sinks.

5. Nurse's office sinks.

6. Classroom sinks.

7. Bathroom sinks.

8. Utility sinks, hose attachments, and outdoor outlets if used to fill water jugs (e.g., for sports team practice).

9. Any sink, including portable sinks, known to be or visibly used for consumption (e.g., toothbrushes, coffee maker, or cups nearby).

(2) All faucets with a potential for consumptive purposes must be sampled and sampling procedures must be representative of consumption. This includes motion sensor faucets that may be present in facilities. Do not turn off the hot water valve prior to sampling motion sensor faucets in order to collect a sample representative of typical use.

(3) Per the EPA, consumptive uses include drinking, cooking, and washing (including teeth brushing). This includes utility sinks, hose attachments, and outdoor outlets if used to fill water jugs, but not ice machines. Identify sampling locations using the standard nomenclature in enclosure (2). If previous LIPA surveys have already identified sampling locations using differing nomenclature, continue to use existing sampling location IDs as defined. Do not sample hot water faucets, showers, and deep sinks used only for utility cleaning, as they are not

to be used for drinking. All fixtures will be included in the Facility Interview Form (if not sampled, provide a reason, i.e., fixture is a hose bib not used for consumption and is clearly marked as such to ensure non-consumptive use). If the sample ID format is too long to be included on the sample bottle label, assign an internal ID number that corresponds to the sample ID format.

(4) Use the information gathered in the Facility Interview Form to develop the sampling plan. The sampling plan should be a robust document specific to the facility and installation that includes the appropriate requirements from the risk communication plan, sampling locations, procedures, laboratory locations, result interpretation, and any immediate or intermediate remedial measures to be taken. If a map of the facility is available (even an emergency evacuation map), it should be used to document the sampling locations and included in the sampling plan. If a prior sampling plan is available, use the existing format and add tabs to the sample location results reporting form in paragraph 8 (Example Summary Results Table), as necessary, for the recurring event. By using the same worksheet for every year of sampling, historical results for each fixture will be available in a single file for comparison purposes. Identify the planned sampling date for initial draw samples. Photographs of the individual fixtures may be useful if the location is difficult to explain or document to ensure the correct fixture is secured and corrective actions are documented.

(5) Installation sampling plans must be reviewed by the region environmental coordinator (N45) and the installation PMA and provided to internal stakeholders prior to any sampling activity.

(6) Installations must use certified laboratories approved by the state or EPA for testing lead in drinking water. Navy Overseas Drinking Water (ODW) systems must use a laboratory approved by the Water Quality Oversight Council (WQOC) Laboratory Authority.

d. Securing Outlets Prior to Sampling

(1) Outlets should be secured 8-18 hours before the sampling occurs, following facility closure. Ensure all sample bottles and chain of custody forms are partially completed with sample ID and scheduled collection date. Label each sample bottle and, if practicable, use a coding scheme to help differentiate samples.

(2) Post enclosure (3) on each sampling location to secure the outlet. Do not secure outlets by closing the water supply valve. Additionally, the facility may use tape and bags over the fixtures to prevent usage. For motion sensor faucets, do not place tape or bags in a manner that will trigger the faucet during the stagnation period.

(3) Ensure the cleaning crew has been instructed not to use water from outlets or toilets within eight hours of the planned sampling start time.

(4) If an aerator maintenance plan exists, coordinate the sampling as to not disturb the aerators for at least 48 hours prior to the scheduled event.

(5) Confirm the facility point of contact the day prior to the sampling event.

e. Sample Collection and Results Interpretation

(1) Do not collect samples in the morning after vacations, weekends, or holidays, as the water will have remained stagnant for too long and will not represent the water used for drinking during most of the days of the week. At 24/7 facilities, the sample will be collected during the period of lowest projected use, typically early in the morning. Per EPA guidance, do not perform pre-stagnation flushing prior to collecting a sample.

(2) The sampler should induce a typical steady flow of water from the outlet and collect a first-draw sample without wasting water from the fixture.

(3) Collect all water samples in wide-mouthed bottles, 250 milliliters in volume, to allow for typical flow rate.

(4) Collect all water samples before the facility opens and before any water is used. Ideally, the water should sit in the pipes unused for at least 8 hours but not more than 18 hours before a sample is taken. If the fixture has a typical stagnation (normal use pattern) of greater than 18 hours, do not perform pre-stagnation flushing prior to collecting a sample as samples collected should be representative of normal first use. If a facility has been temporarily closed due to seasonal use or other reasons, it is recommended that the system be flushed and allowed to let stand for between 8-18 hours to simulate normal use.

(5) Per reference (c), the EPA recommends a two-step sampling process be followed for identifying lead contamination. The two-step sampling process helps to identify the actual source of lead. A sampling strategy flowchart is provided in enclosure (4).

(a) In Step 1, collect the first-draw samples to identify outlets providing water with elevated lead levels. Follow the first-draw sample with a flush sample from the tap located closest to the service connection to identify the level of the lead in the water entering the facility (i.e., at the point of entry).

(b) In Step 2, take follow-up flush samples only from outlets identified as problem locations to determine the level of lead in water that has been stagnant in upstream plumbing, but not in the outlet fixture. As with initial first-draw samples, follow-up flush samples must be taken before a facility opens and before any water is used. Sampler must run the tap for 30 seconds prior to collecting the sample. Additional guidance on how to take follow-up flush samples can be found in reference (c).

(6) The recommended sampling protocol for each type of outlet can be found in reference (d). There are two recommended deviations from this protocol.

(a) For Step 1, the Navy does not require collecting a point of entry or initial service location sample. A facility can collect this sample if data is not available from the facility's Lead

and Copper Rule sampling requirements or from prior year samples. The sampling location will be the first fixture in the building from the service connection point.

(b) For Step 2, if sample results from the first round are greater than 10 ppb, the aerators on affected faucets must be cleaned and the faucet resampled to include a first-draw and flush sample. The first-draw and flush samples will be collected per the recommendations in reference (c). The inclusion of a Step 2 first-draw sample will help identify if the faucet itself is the source of lead, or if particulates are being trapped within the aerator. If the first-draw sample result from Step 2 is below the screening level, indicating that a contaminated aerator was the cause of the initial result above the screening level, an aerator maintenance program must be implemented. Further detail on the aerator maintenance program is outlined in subparagraph 4.g.(2)(h). Aerator cleaning is considered a short-term corrective action. If repeat samples determine that the issue is not the aerator, other permanent corrective actions must be implemented as described in subparagraph 4.g. Motion sensor faucet samples will be collected in the same manner as a typical standard faucet type. Note: Do not turn off the hot water valve, as blended water represents the typical use.

(7) Record all results in the Sample Summary Results Table provided in paragraph 8.

(8) For results greater than 10 ppb, identify the source of lead based on interpretation of results for each type of fixture in reference (c) to allow corrective actions to be implemented. The most common sources of lead in drinking water include:

(a) Debris in aerator. This can be caused by upstream work on the plumbing system or standard degradation of plumbing materials. Replace and clean the aerator on a regular basis to address this source. Debris in aerators may also be present following unidirectional system flushing.

(b) Faucet. Brass components from faucets may contribute to lead in drinking water. Replace the faucet with an NSF 61 Annex G/NSF 372 certified product.

(c) Supply tubing and valves. Brass components in tubing connectors and supply valves may contribute to lead in drinking water. Replace tubing and supply valves with NSF 61 Annex G/NSF 372 certified products.

(d) System components in the plumbing upstream from outlet, e.g., soldered joints, fittings, lead pipe, meters. Lead from upstream plumbing is typically discovered in the follow-up flush sample. Follow-up flush samples will help identify the plumbing segment contributing the lead. Refer to enclosure (5) to determine the length of pipe represented by each sampling volume. Replace affected segments of upstream plumbing with NSF 61 Annex G/NSF 372 certified products. Ensure partial replacement of lead pipes connecting to a dissimilar metal are protected from galvanic corrosion with a dielectric union.

(e) Unpassivated plumbing components. New brass plumbing components have been shown to leach elevated levels of lead immediately after installation, usually followed by a general decline in levels after repeated exposure to water. Research attributes this to drinking

water contacting unpassivated brass components. Unpassivated plumbing components have not yet established a protective film (usually consisting of metal hydroxides and metal carbonates, or a layer of calcium carbonate) on interior plumbing component surfaces in contact with the drinking water. The establishment of the protective film is a process called passivation, and is achieved through repeated exposure to the drinking water. Intermittent water use patterns are known to delay passivation. To promote passivation, follow the flushing protocol in Part 3.9.3 of reference (d) for new plumbing components.

(f) Hot water. Lead will be dissolved more quickly by hot water, therefore, samples collected from blended water sources (hot and cold) may contain increased lead levels. The EPA recommends only using cold water for consumption.

f. Results Notification

(1) Coordinate all results notifications with the region N45, region counsel, Naval Medical Forces, region PAO, installation N45, installation PMA, and installation PAO. Notification of results greater than 10 ppb will be reported to the ICO, region N45 and CNIC HQ. The notification letter templates have been approved by the Navy environmental health risk communication subject matter experts at NMCFHPC; any modification of the template language requires consultation with NMCFHPC risk communication staff prior to signature and dissemination by the ICO.

(2) Use “Template Letter—Staff/Parental Notification (less than or equal 10 ppb)” (subparagraph 8.c.(2)) to notify staff and parents of results of sampling where no exceedances occurred.

(3) Use “Template Letter—Staff/Parental Notification (above 10 ppb)” (subparagraph 8.c.(3)) to notify staff and parents in the event of exceedances of the screening level. In addition, “Optional Template Letter—Staff/Parental Notification (above 10 ppb, prior to follow up testing)” may be used at the discretion of installation and region leadership to notify staff and parents of initial results above 10 ppb but prior to completion of follow up testing per subparagraphs 4.e.(5)(b) and 4.e.(6)(b) and associated results received.

(4) Use “Template (Website)—Staff/Parental Sampling Results Overview” (subparagraph 8.c.(5)) to notify staff, parents and other stakeholders via region and installation websites in addition to the notification letters listed above in subparagraphs 4.f.(2) and 4.f.(3). All results will be posted to the region-specific website and linked to the CNIC HQ Drinking Water website at <https://www.cnic.navy.mil/Operations-and-Management/Base-Support/Environmental/Water-Quality-Information/>.

(5) Use the region briefing card template listed in subparagraph 8.d. of this instruction as an additional optional strategic communication tool in the event of exceedances above the screening level.

g. Corrective Actions. Solutions to correct elevated lead results are typically issued on a short-term and permanent basis. Work closely with the installation Public Works Officer

(PWO), PMA, Environmental, Facilities, and other key drinking water program stakeholders as needed to choose the corrective action appropriate for the facility.

(1) Short-term. Control measures will not be used for more than six months.

(a) Provide bottled water.

(b) Secure problem outlets.

(2) Permanent. Control measures are used to reduce or eliminate the source of lead.

(a) Replace fixture. If the source of lead is localized or limited to a few outlets, replacement may be the most practical solution. Ensure any new device installed is in compliance with current lead-free classification requirements and meets NSF 61 Annex G/NSF 372 standards. Certain brands of blended motion sensor faucets may meet the NSF 61 Annex G/NSF 372 standard; however, a standard (non-blended) faucet is recommended if the fixture is likely used for consumption.

(b) Add a point-of-use device. Point of use devices can be placed on faucets or taps, but not on fountains. Effectiveness varies and any device should meet the NSF 61 Annex G/NSF 372 standard for lead removal. If a point-of-use device is used, a plan of action must be developed that includes an operation and maintenance plan that details filter replacement frequency and funding responsibility.

(c) Check grounding wires. Verify no existing electrical wires are grounded to the water pipes. If found, replace with an alternative grounding system, as electrical current will accelerate the corrosion of lead in pipe materials.

(d) Replace lead piping. If lead pipe is discovered in the building materials, replace with lead-free service lines.

(e) Reconfigure piping. If only a small section of piping in the building contains lead, consider bypassing this section to supply water for ingestion purposes.

(f) Bottled water. If all other corrective actions are impractical, bottled water can be used as a permanent solution.

(g) Permanent outlet closure. If an outlet is not used regularly, permanent removal is a viable option.

(h) Aerator maintenance program. This corrective action can be used if the first sample drawn following aerator cleaning and replacement indicates less than or equal to 10 ppb, and if the follow-up flush samples determine the aerator is the issue, rather than the plumbing behind the fixture. Per reference (c), the EPA allows the use of a preventive maintenance program for aerator cleaning as a corrective action. This corrective action may be used at Navy installations if the program is documented, entered into the facility preventive maintenance

system (i.e., MAXIMO), and performed frequently (recommended on at least a semi-annual basis). Aerator maintenance can also be used in conjunction with any of the listed corrective actions as an additional step to decrease potential sources of lead. Aerator maintenance should also be performed in conjunction with a unidirectional flushing event, as these events may increase particulates in the system.

h. Post-Corrective Action Sampling. Re-sampling will occur after each corrective action is employed. Re-sampling and additional corrective actions must continue until results are less than or equal to 10 ppb. All corrective actions and follow-up testing must follow the procedures outlined in this instruction, including communication and record requirements. A “Do Not Use” sign (i.e., enclosure (3)) must remain posted at affected outlets to ensure they are not used until corrective actions are implemented and retesting is completed.

i. Post-Corrective Action Notification Procedures

(1) Record all results in the Sample Summary Results Table listed in paragraph 8.

(2) Use “Template Letter—Staff/Parental Post-Corrective Action Notification” (subparagraph 8.c.(5)) to notify staff and parents of post-corrective action results after corrective measures have been implemented and testing confirms results are less than or equal to 10 ppb. The notification letter will be signed by the ICO in coordination with the installation PMA and PAO, and pursuant to the facility’s communication plan.

(3) Use “Template Letter (Website)—Staff/Parental Sampling Results Overview” (subparagraph 8.c.(6)) as the sample document to summarize results and explain any corrective actions implemented for each facility tested. All results will be posted to the region-specific website and linked to the CNIC HQ Drinking Water website at <https://www.cnic.navy.mil/Operations-and-Management/Base-Support/Environmental/Water-Quality-Information/>.

j. New Facilities and Replacement Fixtures. Pursuant to reference (d), fixtures for all new facilities, repairs, and replacements will be compliant with the NSF 61 Annex G/ NSF 372 standards. Reference (d) also requires that the system be flushed, and aerators and screens be cleaned following any system flushing. Aerators should be cleaned following any system repair, even when a system flush is not required. Maintain records per paragraph 6. For new construction, sampling is required prior to occupancy to determine the presence of lead and must follow the sampling process outlined in subparagraphs 4.b. through 4.i. For plumbing modifications (e.g., fixture replacement, water pipe cutting and replacement or repair) at existing occupied facilities, sampling is required in accordance with subparagraph 4.k.(2).

k. Annual Audits

(1) ICOs, in coordination with PWOs, will ensure an annual audit of each priority area is performed each fiscal year to determine if any plumbing or treatment modifications have been made. At a minimum, the annual audits must include the following steps:

(a) Facility walk-through to compare prior year sampling plan and facility map to existing conditions.

(b) Review of priority area locations with Department of Defense Education Activity and CNIC N9 representatives to determine if any new facilities have been added since the last audit or sampling.

(2) If any modifications are noted during the audit, the installation Public Works Department (PWD) staff must confirm that the replacement work conforms to subsection 300g-6 of reference (b) by reviewing all available lead-free certification paperwork or other indicators identifying conformance to NSF 61 Annex G/NSF 372 standards. A baseline sampling event for all modifications, regardless of lead-free certification, must be conducted immediately upon identification and affected outlets must be secured until sampling is completed, and results demonstrate lead levels less than or equal to 10 ppb. The sampling event will follow all sampling process and notification requirements outlined in subparagraphs 4.b.through 4.i..

1. Results Reporting. At the conclusion of each fiscal year, installations will provide a summary of priority facilities that have collected LIPA samples to NAVFAC HQ and CNIC N45 via the region N45. Each region should be prepared to submit a copy of the sampling results, as recorded in the Example Summary Results Table listed in paragraph 8, as well as a summary of corrective actions and any lessons learned no later than 10 November for LIPA activity in the preceding fiscal year. The summary must also capture completion of the annual audits described in 4.k.(1). Also ensure the results are posted on the installation's website and accessible from the CNIC HQ Drinking Water website at <https://www.cnic.navy.mil/Operations-and-Management/Base-Support/Environmental/Water-Quality-Information/>.

5. Responsibilities

a. CNIC

(1) CNIC N45 will:

(a) Provide programming, budgeting, and oversight of the implementation of this instruction.

(b) Coordinate responses to LIPA exceedances with NMCFHPC and the Region N45 and report all LIPA exceedances in the Annual Shore Drinking Water Report required by reference (a).

(2) CNIC PAO will coordinate with region and installation staffs to assist in preparing the communication plan and fielding specific questions that may arise during LIPA efforts. Communication to all internal and external stakeholders in enclosure (6), including the PMA, must allow sufficient planning time prior to the sampling event per enclosure (1). The installation PAO must be familiar with this instruction and be prepared to respond to media queries. Requirements for communications to each stakeholder are incorporated into each step of this instruction.

(3) CNIC N9 will maintain awareness of this policy as it applies to their facilities.

b. Region

(1) Region N45s will:

(a) Review and approve sampling plans with concurrence from the facility director and Naval Medical Forces.

(b) Submit a copy of the sampling results, as recorded in the Example Summary Results Table listed in paragraph 8, as well as a summary of corrective actions and any lessons learned to CNIC no later than 10 November for LIPA activity in the preceding fiscal year.

(2) Region PAOs will:

(a) Coordinate with installation PAOs to develop initial public awareness strategies and obtain concurrence from internal stakeholders.

(b) Review notification letters prior to installation PAOs disseminating to staff and parents. Ensure the Navy Medicine PMA performs a final review of notification letters prior to issuance. Additionally, coordinate with the installation PMA to contact NMCFHPC for technical or health risk support.

(c) Maintain a region-specific Public Affairs guidance document for LIPA in coordination with region N45.

(3) Region N9s will maintain awareness of this policy as it applies to their facilities and will coordinate with the Region PAO and Installation N9 on communication with stakeholders as needed.

c. Installation

(1) ICOs will:

(a) Sign and distribute letters per subparagraphs 4.b.(4) and 4.f.(1) to notify staff and parents of forthcoming LIPA sampling, LIPA sampling results and any exceedances, and corrective actions implemented to address exceedances.

(b) Host informational forums for staff and parents in the case of any exceedances.

(2) Installation Public Works Environmental will:

(a) Brief installation leadership and PMA on the requirements of this instruction.

(b) Coordinate with facility directors to arrange site visits to inventory water fixtures and develop a sampling plan.

(c) Coordinate with the installation PAO and PMA to inform staff and parents of this policy and provide advance notification for any sampling at installation facilities.

(d) Conduct sampling of priority fixtures identified during the site visit.

(e) Coordinate with the installation PAO and PMA to notify all stakeholders of lead results greater than 10 ppb and secure the impacted fixtures.

(f) Conduct follow-up sampling at the source of any exceedance during initial or routine sampling and coordinate with the installation PMA to outline corrective actions for results greater than 10 ppb.

(g) Conduct post-corrective action sampling to ensure the efficacy of corrective actions taken.

(h) Train staff in lead minimization procedures.

(3) Installation PAOs will:

(a) Coordinate with the region PAO to develop the initial public awareness strategy.

(b) Notify CNIC N45 and external stakeholders of LIPA sampling, schedule, results, and communications plans.

(c) Coordinate with the Navy Medicine PMA and the region PAO to review and revise (if needed) the N45 drafted notification letter drafts. The Navy Medicine PMA must perform a final review of all notification letters prior to issuance.

(d) In coordination with the region PAO, finalize and execute a public awareness strategy to notify staff and parents of LIPA sampling results and any corrective actions taken using the methods identified in the communications plan.

(4) Installation PWOs will:

(a) Implement the corrective actions recommended by the installation environmental and PMA.

(b) Conduct annual facility audits, per subparagraph 4.k., to assess the drinking water system for any changes in treatment or distribution.

(5) Installation N9s will:

(a) Coordinate with the ICO and installation PAO to notify stakeholders of sampling, results, and corrective actions for any N9 facilities.

(b) Coordinate with installation Public Works Environmental to implement and track corrective actions for any N9 facilities.

(c) Support the ICO and PWO with annual reviews to determine if any new priority areas have been added since the last annual audit or sampling event.

d. Bureau of Medicine and Surgery

(1) NMCFHPC will:

(a) Review and approve notification letters sent to parents and staff in coordination with Naval Medical Forces, and the region N45 and installation environmental director.

(b) Coordinate response to any LIPA exceedances with the installation PMA, Naval Medical Forces, and the region N45 and installation environmental director.

(2) Naval Medical Forces (Atlantic/Pacific) will:

(a) Review and approve risk communication plans in coordination with the region PAO and NMCFHPC.

(b) Review and approve sampling plans in coordination with the region N45.

(c) Coordinate response to any LIPA exceedances with NMCFHPC, the installation PMA, and the region and installation N45.

(3) PMA will:

(a) Review sampling plans developed by the installation N45 and obtain approval from the regional PMA.

(b) Review and revise (if needed) the N45 drafted notification letters prior to the PAO sending to parents and staff.

(c) Review sampling data with the installation N45 and make recommendations for corrective actions based on the guidance in reference (c).

(d) Consult with NMCFHPC for technical and risk communication support.

6. Records Management

a. Records created as a result of this instruction, regardless of format or media, must be maintained and dispositioned per the records disposition schedules located on the Department of the Navy Assistant for Administration, Directives and Records Management Division portal page, at <https://portal.secnav.navy.mil/orgs/DUSNM/DONAA?/DRM?/Records-and-Information-Management/Approved%20Record%20Schedules/Forms/AllItems.aspx>.

b. Per reference (a), records of sampling and testing of drinking water in priority areas will be retained for 12 years. Records will include, but are not limited to:

- (1) Sampling plan (including map).
- (2) Sample results.
- (3) Notification letters.
- (4) All external communications.
- (5) Records of corrective actions and follow-up sample results.
- (6) Annual audit records.

(7) Certificates for lead-free materials (with mapped location) (new facilities and renovations).

c. Records will be kept by the installation and regional environmental staff per standard business practices, such as the Environmental Data and Metrics Website. Additionally, sample results will be posted on the regional CNIC website water quality page, which will be hyperlinked from the installation website.

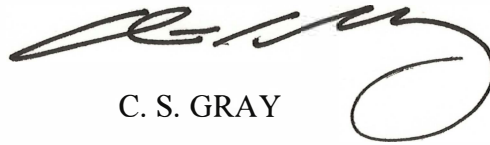
d. For questions concerning the management of records related to this instruction or the records disposition schedules, contact the local records manager or the OPNAV Records Management Program (DNS-16).

7. Review and Effective Date. Per OPNAVINST 5215.17A, CNIC (N4) will review this instruction annually on the anniversary of its effective date to ensure applicability, currency, and consistency with Federal, Department of Defense, Secretary of the Navy, and Navy policy and statutory authority using OPNAV 5215/40, review of instruction. This instruction will be in effect for ten years unless revised or cancelled in the interim and will be reissued by the 10-year anniversary date if it still required, unless it meets one of the exceptions in OPNAVINST 5215.17A, paragraph 9. Otherwise, if the instruction is no longer required, it will be processed for cancellation as soon as the need for cancellation is known following the guidance in OPNAV Manual 5215.1 of May 2016.

8. Forms Management. The forms listed in subparagraphs 8.a. through 8.d. are available for download via the CNIC N4 Flankspeed SharePoint website at <https://flankspeed.sharepoint-mil.us/mcas-gov.us/sites/CNICHQHub/N45>.

- a. Facility Interview Form.
- b. Sample Summary Results Table.
- c. Example Notification Letters.

- (1) Template Letter—Staff, Parent and Caregiver Sampling Program Announcement.
 - (2) Template Letter—Staff/Parental Notification (less than or equal 10 ppb).
 - (3) Template Letter—Staff/Parental Notification (above 10 ppb).
 - (4) Optional Template Letter—Staff/Parental Notification (above 10 ppb, prior to follow up testing).
 - (5) Template Letter—Staff/Parental Post-Corrective Action Notification.
 - (6) Template Letter (Website)—Staff/Parental Sampling Results Overview.
- d. Region Briefing Card Template.



C. S. GRAY

Releasability and distribution:

This instruction is cleared for public release and is available electronically only via CNIC Gateway 2.0, <https://g2.cnic.navy.mil/Directives/default.aspx>.

DRINKING WATER SAMPLING FOR LEAD PROCEDURES AND TIMELINE

Task	Description and Comments	Responsibility	Days after (before) sampling event
Preparation for Sampling (P)			
P1	<u>Brief Installation Leadership.</u> Provide installation leadership and public health officials an overview of the U.S. Navy’s LIPA requirements and reference (c). At a minimum, this should include the ICO, PAO, Morale, Welfare, and Recreation, PWO, installation water quality board (if applicable), Office of General Counsel, and PMA.	Installation N45	(35)
P2	<u>Develop Public Awareness Strategy (Communication Plan).</u> PAO (installation and region) provides initial public affairs strategy with concurrence of stakeholders. Regional PAO coordinates with PMA, Chief of Information (CHINFO) and the Command Master Chief (CMC) for approval on public affairs approach.	Installation and Region PAO	(35)
P3	<u>Notify Region and External Stakeholders.</u> Inform stakeholders and other interested parties of upcoming LIPA sampling at their facilities, the schedule, and communication plan.	Installation N45 and ICO	(30)
P4	<u>Inventory Water Fixtures.</u> Coordinate with the facility director to visit and survey the facility for water fixtures that are or could be used for drinking, food preparation, washing, or other activities that could result in ingestion.	Installation N45	(28)
P5	<u>Develop Sampling Plan.</u> Using the “Sample Summary Results Table,” develop and confirm the complete list of water fixtures with proposed sampling dates and times. Provide plan to the installation PMA for routing and approval to Naval Medical Forces.	Installation N45	(21)
P6	<u>Review and Approve Sampling Plan.</u> Review and approve the sampling plan with concurrence from the CDC, CDH, and the SAC director. Coordinate plan approval with the region's PMA program office.	Region N45	(18)

Task	Description and Comments	Responsibility	Days after (before) sampling event
P7	<u>Finalize Sampling Plan.</u> Finalize plan based on comments from P5; submit to installation commanding officer, region, and PMA.	Installation N45	(15)
P8	<u>Draft Parent/Staff Notification Letter.</u> Using the example notification letter templates from paragraph 8 of this instruction, develop draft letter and provide to PMA, PAO, and ICO.	Installation N45	(15)
P9	<u>Review Public Awareness Strategy for Corrective Action Strategy.</u> PAO (installation and region) provides initial public awareness strategy with concurrence of stakeholders. Regional PAO coordinates with CHINFO, CMC, and PMA for approval on public affairs approach and provides strategy to CNIC PAO for review.	Installation and Region PAO	(13)
P10	<u>Review and Issue Parent/Staff Notification Letter.</u> In coordination with installation N45, PAO, and PMA review, revise the notification letter, and distribute to staff and parents.	ICO	(10)
P11	<u>Meet with CDC, CDH and SAC Director.</u> Meet with facility director to prepare for sampling. Preparation includes education of personnel (including cleaning staff) to stop using water after identified closure hour to allow at least 8 but no more than 18 hours of stagnation prior to sampling.	Installation N45	(7)
Sampling and Results (S)			
S1	<u>Secure Fixtures.</u> Secure fixtures and label bottles for sampling as identified in the plan. Fixtures can be secured by facility director or building manager point of contact, as coordinated.	Installation N45	(1)
S2	<u>Conduct Sampling at Identified Fixtures.</u> Conduct first-draw samples as identified in sampling plan. Laboratory result turnaround time should be no more than 20 days.	Installation N45	0
S3	<u>Review Results.</u> Review results and determine follow-up needed for samples with greater than 10 ppb.	Installation N45	20

Task	Description and Comments	Responsibility	Days after (before) sampling event
S4	<u>Notify Stakeholders and Secure Fixtures.</u> Notify ICO, installation PMA, and region of all results. Secure any fixtures with levels greater than 10 ppb. Explain verbally and in writing to CDC, Child Development Group Home, and youth center staff requirements for these fixtures. Begin weekly SITREPs to update the chain of command of any corrective actions. Region immediately notifies CNIC and NAVFAC HQ Environmental (EV).	Installation N45	21
S5	<u>Schedule Follow-up Sampling.</u> Schedule follow-up sampling for any fixture with greater than 10 ppb. Follow-up samples will be collected per this instruction.	Installation N45	21
S6	<u>Conduct Follow-Up Sampling at Identified Fixtures.</u> Retrain staff as needed to ensure fixtures are left stagnant at least 8 but no more than 18 hours prior to sampling. Lab results turnaround time should be no more than 10 days.	Installation N45	26
S7	<u>Review Follow-Up Sampling Results.</u> Review results with installation PMA using EPA guidance to determine source of lead and recommended corrective actions. Fixtures must remain secure until corrective actions are complete.	Installation N45 and PMA	36
S8	<u>Finalize and Execute Public Awareness Strategy.</u> Finalize any frequently asked questions, press releases, articles, etc., as identified. Prepare staff for interviews (as required).	Installation PAO	37
S9	<u>Notify Stakeholders of Results and Recommendations.</u> Notify ICO, region, PMA, PAO, CDC, CDH, and SAC director of results. Copies of notifications will be provided to CNIC N45 and NAVFAC HQ EV for awareness.	Installation N45 and PAO	37
S10	<u>Notify Staff and Parents of Results.</u> Deliver letters (by hand for facilities with results greater than 10 ppb) in coordination with installation N45 and PAO and conduct info sessions as necessary.	ICO	37

Task	Description and Comments	Responsibility	Days after (before) sampling event
S11	<u>Post Results to Website.</u> Post results on installation website (public).	Installation PAO	37
S12	<u>Train Staff on Lead Minimization Procedures.</u> Train staff on lead minimization procedures.	Installation N45	37
Corrective Actions (C)			
C1	<u>Initiate Corrective Actions.</u> Ensure corrective actions are completed as planned in S8. Continue weekly SITREPs until resampling is completed.	Installation PWO	38
C2	<u>Schedule Post-corrective Action Sampling.</u> Prepare all personnel for follow-up sampling as necessary. Repeat notification steps in P8, P9, and P10.	Installation N45	TBD
C3	<u>Conduct Post-corrective Sampling.</u> Collect post-corrective action sampling at identified fixtures. Fixtures will remain secured until results are reviewed.	Installation N45	TBD
C4	<u>Review Post-corrective Action Sampling Results.</u> Fixtures with less or equal to 10 ppb can be returned to service. Additional corrective actions will be necessary per reference (c) guidelines if levels are still greater than 10 ppb.	Installation N45	TBD
C5	<u>Notify Stakeholders of Results and Recommendations.</u> Notify ICO, region, PMA, CNIC N45, NAVFAC HQ EV, CDC, CDH, and SAC Director of results.	Installation N45	TBD
C6	<u>Notify Staff and Parents of Corrective Actions.</u> Draft parent/staff notification letter (see Example Notification Letters form) in coordination with installation N45, PAO and PMA to notify of completed actions. Upload notifications and results to website. Copies will be provided to CNIC N45/NAVFAC HQ EV.	ICO	TBD

SAMPLE IDENTIFICATION FORMAT

[Installation ID]-[Building #]-[Location ID]-[Outlet ID]-[Sample Type ID] (e.g., NSAA-A332-HALLFloor2-WFC-FD)

Installation ID	Description
NSAA	Navy Support Activity Atlantis
AOLF	Atlantis Outlying Landing Field
RRA	Remote Radar Station Atlantis

Location ID	Description (can be amended by facility-specific info)
K	Kitchen
HERM	Home Economic Room
LOUNGE	Teacher's Lounge
NURSE	Nurse's Office
RM	Classroom
BATH	Bathroom
UT	Utility Room
HOSE	Hose Attachment
HALL	Hallway

Outlet ID	Description
K	Kitchen-type Sink used for Food Prep or Washing Dishes
HHW	High Hand Washing Faucet (intended for adults)
LHW	Low Hand Washing Faucet (intended for toddlers)
HWCOMB	Handwashing Faucet from Combination Sink
TB	Teeth Brushing Faucet (if no teeth brushing occurs, use applicable hand washing ID)
WFC	Water Fountain (Cooler)
WFB	Water Fountain (Bubbler)
WFCOMB	Water Fountain Outlet from Combination Sink
...(A, B, C, ...)	Assign letter if more than one outlet is in same location (start from left to right)

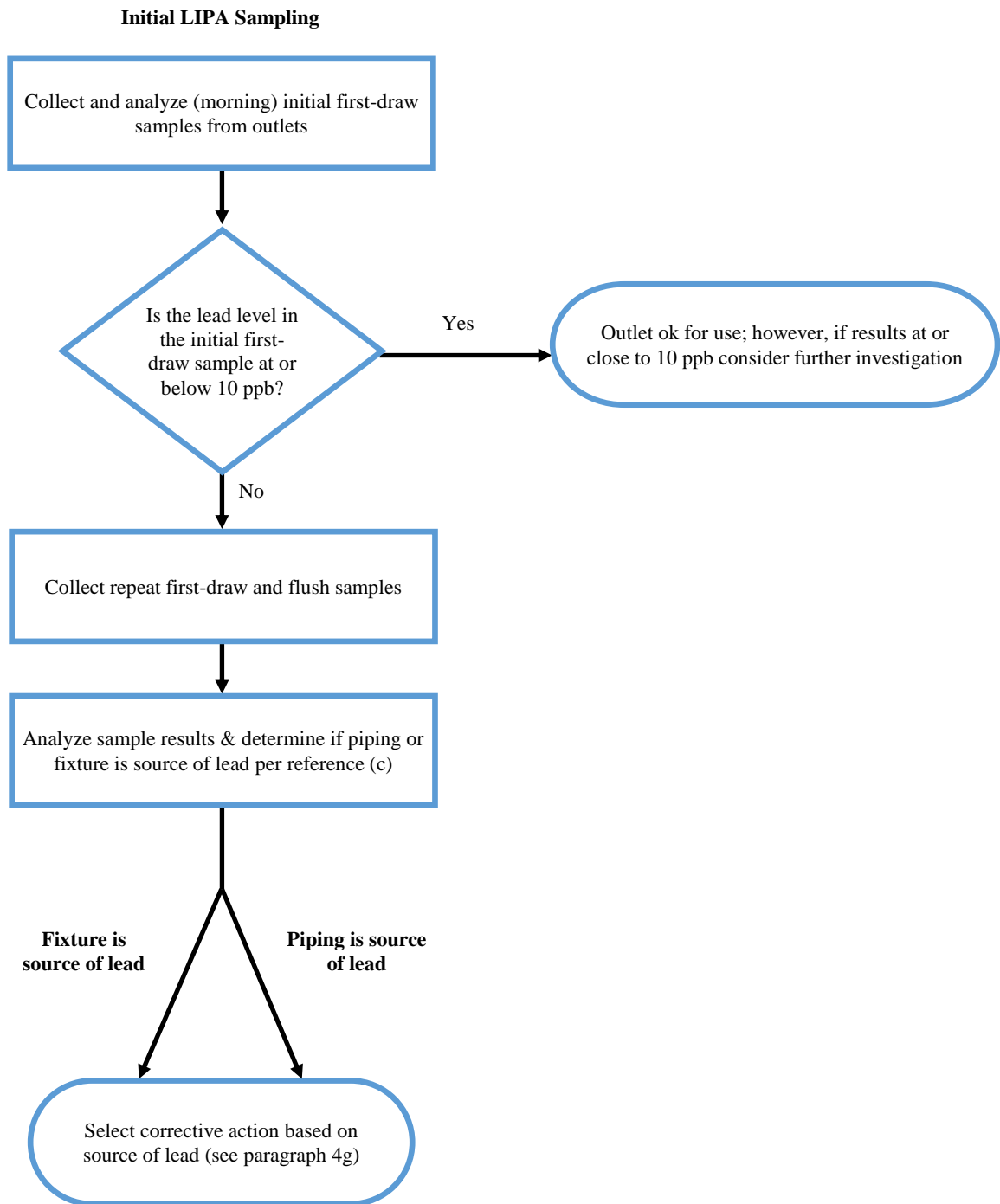
Sample Type ID	Description
FD	First-Draw
2FD	Second First-Draw
FF30	Follow-Up Flush (30 sec. after opening outlet for first-draw)
FF15	Follow-Up Flush (15 min. flush for water cooler only)

SECURED OUTLET SIGN

**SECURED DO
NOT USE!**

**ENVIRONMENTAL
WATER SAMPLING IN
PROGRESS**

SAMPLING STRATEGY FLOWCHART



Begin at top of flowchart for the next LIPA sampling event in 5 years

PIPE VOLUME TABLE

Flush the estimated volume of water between the service connection and the sample tap. You can estimate the volume of water by using below Pipe Volume Table. EPA recommends selecting the pipe diameter that is one size larger than the actual pipe size, since pipe material thickness can vary, affecting the interior diameter and the actual volume of water. You can also estimate the volume by measuring the length and diameter of piping from tap to connection and the length, and diameter of the service connection itself into a graduated beaker or cylinder to ensure that you have collected the correct volume, and then close the tap.

Pipe Volume Table (Volumes Listed in Liters)						
Pipe Length (Feet)	Pipe Diameter (Inches)					
	3/8	1/2	5/8	3/4	1	1-1/2
2	0.06	0.09	0.14	0.19	0.32	0.50
3	0.09	0.14	0.21	0.29	0.49	0.74
4	0.11	0.18	0.27	0.38	0.65	0.99
5	0.14	0.23	0.34	0.48	0.81	1.24
6	0.17	0.27	0.41	0.57	0.97	1.48
7	0.20	0.32	0.48	0.67	1.14	1.73
8	0.23	0.36	0.55	0.76	1.30	1.98
9	0.26	0.41	0.62	0.86	1.46	2.22
10	0.28	0.45	0.69	0.95	1.62	2.47
11	0.31	0.50	0.75	1.05	1.78	2.72
12	0.34	0.55	0.82	1.14	1.95	2.96
13	0.37	0.59	0.89	1.24	2.11	3.21
14	0.40	0.64	0.96	1.33	2.26	3.46
15	0.43	0.68	1.03	1.43	2.43	3.71
16	0.46	0.73	1.10	1.52	2.60	3.95
17	0.49	0.78	1.16	1.62	2.76	4.20
18	0.51	0.82	1.23	1.71	2.92	4.45
19	0.54	0.86	1.30	1.81	3.08	4.70
20	0.57	0.91	1.37	1.90	3.24	4.94
25	0.71	1.14	1.71	2.38	4.06	6.18
30	0.86	1.36	2.06	2.85	4.87	7.41
35	1.00	1.59	2.40	3.33	5.68	8.65
40	1.14	1.82	2.74	3.80	6.49	9.88
60	1.43	2.27	3.43	4.76	8.11	12.36
Notes:						
1. Volumes can be added together for pipe lengths not listed.						
2. A wide-mouthed 250mL bottled is filled in approximately 12 seconds at steady flow.						

LIST OF INTERNAL AND EXTERNAL STAKEHOLDERS

INTERNAL STAKEHOLDERS
Installation <ul style="list-style-type: none">• Commanding Officer• Fleet and Family Readiness Director (N9)• Environmental Programs Director (N45)• Public Works Officer (PWO)• Facilities Management Director• Preventive Medicine Authority• Public Affairs Officer• Office of General Counsel or Judge Advocate General (JAG)
Region <ul style="list-style-type: none">• Commander• Fleet and Family Readiness Director (N9)• Facilities and Environmental Director (N4)• Environmental Programs Director (N45)• Naval Medical Forces (Atlantic/Pacific)• Public Affairs Officer• Office of General Counsel or Judge Advocate General (JAG)
Headquarters <ul style="list-style-type: none">• Fleet and Family Readiness Director (N9)• Facilities and Environmental Director (N4)• Environmental Programs Director (N45)• Energy and Base Operating Support Director (N42)• Public Affairs Officer• Office of General Counsel or Judge Advocate General (JAG)• Navy and Marine Corps Public Health Center
Other Interested Parties <ul style="list-style-type: none">• Department of Defense Education Activity (Installation, Region, and HQ)• NAVFAC HQ Environmental Business Line• Assistant Regional Engineer
EXTERNAL STAKEHOLDERS
<ul style="list-style-type: none">• Parents• Facility Staff