U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

Air Traffic Organization Policy

ORDER
JO 3900.61A

Effective Date:
04/09/2019

SUBJ: Drinking Water Testing at Air Traffic Organization Facilities

The Air Traffic Organization (ATO) is committed to providing potable water to its employees in accordance with Environmental Protection Agency (EPA) and Occupational Safety and Health Administration (OSHA) regulations and labor union agreements. This order provides direction and guidance regarding the testing of drinking water at ATO facilities. The objectives of this policy are to:

- Standardize drinking water testing procedures at ATO facilities;
- Define roles and responsibilities for managing drinking water issues;
- Provide procedures for responding to drinking water quality issues.

This policy must be implemented immediately for all future drinking water testing events. For facilities that have conducted testing within the previous three years, protocols within this policy must be implemented during the next scheduled sampling event. It is not necessary to retest drinking water that has been sampled within the last three years to comply with this policy.

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Chief Operating Officer
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1. Purpose of This Order. This order provides direction and guidance regarding the testing of drinking water at ATO facilities. The objectives of this order are to standardize drinking water testing procedures, define roles and responsibilities for managing drinking water issues, and provide procedures for responding to drinking water quality issues.

2. Audience. All ATO employees and managers who are involved in drinking water testing at ATO facilities.

3. Where Can I Find This Order. You can find an electronic copy of this order on the Directives Management System (DMS) website: https://employees.faa.gov/tools_resources/orders_notices/. Or go to the MyFAA employee website, select "Tools & Resources" and then select "Orders & Notices".

4. What This Order Cancels. FAA Order JO 3900.61, Drinking Water Testing at Air Traffic Organization Facilities, dated September 1, 2010.

5. Explanation of Policy Changes. This revised order expands testing requirements to leased facilities. The order also updates sampling protocols, test methods, and testing parameters.

6. Roles and Responsibilities.

a. Air Traffic Control (ATC) Facilities, Environmental, Occupational Safety and Health (EOSH) Services. The ATC Facilities EOSH Services is responsible for maintaining and updating this drinking water policy, coordinating funding requests for testing, and providing technical assistance to resolve drinking water issues.

b. ATO Project Managers/Project Implementers. ATO Project Managers/Project Implementers are responsible for ensuring the testing of drinking water at facilities affected by projects such as newly constructed, renovated and newly plumbed systems at ATO facilities.

c. Facility Managers. Facility Managers, for purposes of this order, are the persons who have overall responsibility for ensuring that National Airspace System maintenance activities are performed at an ATO facility. Facility Managers are responsible for requesting appropriate funding to meet the requirements of this order, ensuring that required drinking water testing is conducted and results analyzed for facilities they manage, and implementing any necessary corrective actions. Facility Managers will also be responsible for retaining testing results and communicating with employees and union representatives regarding drinking water issues at that facility.

d. Contracting Officer Representatives (COR). CORs are staff designated to facilitate administration of a lease on behalf of the Real Estate Contracting Officer (RECO). CORs are responsible for obtaining and disseminating drinking water test results from the lessor to facility management, where the lease specifies that testing drinking water is the lessor's responsibility.

e. ATO EOSH Professionals. ATO EOSH Professionals, including Safety and Environmental Compliance Managers and Service Center Environmental Requirements Specialists, will provide technical and analytical assistance to Facility Managers in implementation of this order as requested, including development of sampling plans and corrective action plans.

f. Employees. Employees are responsible for elevating any drinking water quality issues to their supervisor or Facility Manager.

7. Scope and Applicability.

a. Owned facilities. This policy applies to all ATO owned facilities, except for:

(1) Facilities where all potential drinking water sources have signs posted indicating that the water is non-potable.

(2) Facilities that meet the definition of a "public water system" as defined by the Safe Drinking Water Act. Because these facilities must comply with the more comprehensive sampling and testing requirements of 40 CFR Part 141, compliance with those requirements fulfills the drinking water testing requirements of this order.

b. Leased facilities. This policy applies to all Federal Aviation Administration (FAA) leased facilities (to include non-ATO leased facilities) where ATO employees have access to drinking water. In the case of leased facilities, FAA's preferred approach is to require the lessor to conduct drinking water testing in accordance with the requirements of this order and provide the results to the FAACOR.

c. Effective Date. Protocols within this policy apply to the next scheduled sampling event. It is not necessary to retest drinking water that has been sampled within the last three years to comply with this policy.

8. Testing Requirements.

a. Testing for Newly Constructed, Renovated or Newly Plumbed ATO Facilities.

(1) Drinking water will be tested for lead, copper, total coliforms at newly constructed, renovated and newly plumbed systems at ATO facilities, prior to use for consumption. The renovation at the facility must be as such that the water piping/delivery system is affected. Samples for testing of drinking water will be taken downstream of new plumbing. The testing will be conducted prior to the contractor acceptance inspection (CAI). Any exceedance from the action levels identified in paragraph 9.b discovered during the testing must be mitigated as part of the CAI process.

(2) The Safe Drinking Water Act (SDWA) mandates the use of lead-free materials in public water systems and the plumbing of facilities that provide water for consumption. For

construction, renovation, and repair projects, the use of solder and flux containing more than 0.2 percent lead and domestic water pipe or pipe fittings with a weighted average lead content of wetted surfaces of more than 0.25 percent is prohibited.

b. Testing of Facilities that obtain Drinking Water from Non-Public Water Systems. Where facilities receive drinking water from non-public water systems (e.g., well, surface waters) that are not federally regulated by the SDWA, drinking water must be analyzed at least annually for nitrates, total dissolve solids, total coliforms, and any other contaminants that are appropriate based on local conditions such as fluoride, VOCs and radon, or as determined by the state or local requirements or other FAA orders for drinking water quality (whichever is the most stringent). You should also test your well immediately if there are known problems with ground water or drinking water in your area; conditions near your well has changed significantly (i.e. flooding, land disturbances and new construction or industrial activity); you replace or repair any part of the your well system; you notice a change in your water quality (i.e. odor, color, taste). ATO EOSH Professionals should be consulted for the development of an appropriate sampling plan for these facilities.

c. Testing of Facilities that obtain Drinking Water from Public Water Systems. For facilities where water is supplied by a public water system (e.g., municipal water), drinking water will be tested at least once every three years for lead, copper, and total coliforms. Samples may also be tested for other parameters if there are other concerns with the facility's drinking water (see Appendix C, Other Possible Tests Based on Visual Observations or Other Factors, for other possible tests). The result of these samples should be taken in conjunction with the local Consumer Confidence Report (CCR) of the water treatment facility that supplies the water for the facility being tested for a complete understanding of the drinking water quality at the site.

d. Testing in Response to Incidents or Emergencies. If an action occurs that could impact the facility's drinking water, testing may be needed to confirm the quality of the facility's drinking water. Circumstances that may indicate the need for this testing may include, but are not limited to:

(1) Facilities using well water where groundwater contamination has occurred.

(2) Water main breaks prior to water entering the facility.

(3) Replacement of building water distribution system appurtenances

(4) Public advisories (e.g., boil water advisory) issued from local water suppliers.

(5) Objections to water odor, taste, or color by one or more employee.

(6) Sampling plan conducted in accordance with a previously established corrective action plan to restore the drinking water to potable standards.

If the testing in response to incidents or emergencies meets the sampling requirements of paragraphs (b) and (c), the test may serve as a triennial test.

9. Procedures for Sampling and Analysis.

a. Drinking water samples must be obtained using the sampling procedures outlined in Appendix B, Drinking Water Sampling Protocols.

b. Sample analysis must be conducted by a drinking water laboratory certified by EPA or the state for each drinking water parameter being tested. Laboratories supporting public water systems must use EPA-approved analytical methods when analyzing samples. In accordance with 40 CFR 141.23 and 40 CFR 141.21, the test methods and action levels to be used are:

Table 1.

Parameter	Test Method	Action Level
Lead (Pb)	EPA Test Method Total Inductively Coupled plasma-Mass Spectrometry (ICP-MS) 200.8 or Standard Method (SM) 3113B	0.015 mg/l
Copper (Cu)	EPA Test Method Total ICPMS 200.8 or SM3111B	1.3 mg/l
Total Coliforms Presence/Absence	Microbiological Parameters utilizing SM9221D	Any positive coliform test will be considered an indicator of contamination

10. Elevated Contaminant Level Response Process. When it has been determined that the water quality inside the facility does not meet current EPA primary drinking water standards or exceeds EPA-established action levels, the Facility Manager will be responsible for ensuring the following actions are conducted:

a. Post signs at all affected fixtures, informing employees not to use the fixtures until further notice. Signage should indicate "Not Potable" or "Do Not Drink".

b. Develop a corrective action plan to document the actions that will be taken to restore water quality. ATO EOSH Professionals should be consulted for development of an appropriate corrective action plan. The corrective action plan must document and address the following aspects:

(1) Employee notification and sanitation procedures;

(2) Actions needed to determine source of contamination;

(3) Actions taken to restore water to potable water standards (e.g., repair/replacement of affected supply system components);

(4) Actions taken to provide employees potable water (Bottled water may only be provided when drinking water at the site has been deemed unsafe for human consumption in accordance with FAA policy in the Acquisition Management System (http://fast.faa.gov)); and

(5) Sampling plan to confirm water meets potable water standards within ten (10) days following correction/abatement.

c. Inform facility supervisors and employees of the corrective action plan contents.

11. Recordkeeping. The Facility Manager must retain copies of the water quality test results for the previous three years on file. Corrective action plan documentation must be retained for three months after the corrective action and necessary follow-up have been completed.

Appendix A. Administrative Information

1. Distribution. The order will be distributed electronically and can be found at Directives Management System (DMS) website: https://employees.faa.gov/tools_resources/orders_notices. ATO offices may obtain a hard print copy of the order by contacting EOSH Services.

2. Background. The SDWA of 1974 was established to protect the quality of drinking water in the United States. The Act authorizes EPA to establish minimum standards to protect tap water and requires all owners or operators of public water systems to comply with these primary (health-related) standards. These standards are found in 40 CFR Part 141. In addition, the OSHA regulations require that potable water be provided in all places of employment, for drinking, washing, and cooking (29 CFR §1910.141(b)).

3. Definitions.

a. Coliform. A group of related bacteria whose presence in drinking water may indicate contamination by disease-causing microorganisms.

b. Consumer Confidence Report (CCR). An annual drinking water report circulated to users of a community water system to provide information on the water's quality.

c. First Draw Sample. A water sample that has stood motionless in the plumbing pipes for at least six hours and is collected without flushing the tap.

d. Flush Sample. A water sample that has not been in contact with the plumbing system for an extended period of time.

e. Potable Water. Water that meets the standards for human consumption of the state and local authority having jurisdiction or water that meets the quality standards prescribed by the EPA's National Interim Primary Drinking Water Regulations, published in 40 CFR Part 141.

f. Public Water System (PWS). An entity that provides water for human consumption through pipes or other constructed conveyances to at least 15 service connections or serves an average of at least 25 people for at least 60 days a year.

Appendix B: Drinking Water Sampling Protocols

Preparation for Sampling

1. Contact a certified drinking water testing laboratory or certified environmental laboratory to obtain sample containers and detailed sampling instructions. In the absence of detailed instructions from the lab, follow the protocol below.

2. Perform an inventory of all drinking water sources, such as drinking water fountains, break room/cafeteria sinks, icemakers, and any other sink or water source known to be or visibly confirmed to be used for consumption (e.g., coffee maker or cups are nearby). In addition, identify all water sources that are not routinely used for drinking water, but where water could be accidentally ingested (e.g., showers, bathroom sinks).

3. Ensure that the water fixtures to be sampled for copper and lead are not used for at least 6 hours before sampling by marking each fixture to be sampled with a sign stating "DO NOT USE". It is permissible to use tape to make the fixture inoperable for the required 6 hours. (Note: Do not use a shut off valve to shut the water off at the fixture because it is possible to release some quantities of solder and metal deposits in the valve.)

4. Inform facility staff that water is being tested at their facility and request that they observe signs that will be posted on various fixtures in the facility.

General Sampling Instructions

1. To prevent sample contamination, use antiseptic techniques. Wash hands with soap and water or sanitizer and use nitrile or powder-free latex gloves. To collect the sample, hold the sample container in one hand and remove the cap with the other hand. Do not touch the opening or any interior part of the sample container or cap. Do not set the cap down.

2. Immediately replace cap and tighten securely. Label bottle with facility name/identification (ID), sample location/ID, name of person sampling, date, and time of sample taken. The samples must be immediately placed in a location that is <50°F and kept out of direct sunlight. Do not allow the samples to freeze. Bacteriological samples must be received the same day or within 24 hours of the samples being taken. Lead and copper samples must be received by the laboratory within 14 days of sampling if not acid preserved. Follow the laboratory's shipping instructions.

Sampling for Lead and Copper

1. Test all inventoried drinking water sources for lead and copper, except those that are not routinely used for drinking water, but where water could be accidentally ingested (e.g., showers, bathroom sinks). Also exclude from sampling any fixtures with devices designed to change the water composition, such as water softeners and reverse osmosis devices.

2. Collect a "first-draw" or "first-flush" sample from each selected fixture. To achieve a first draw, do not run water for at least 6 hours before collecting these samples. Do not remove aeration devices prior to sampling. Turn the cold water on and fill the sample container to the neck of the bottle or the fill line with the first flow from the faucet. Do not allow any water to run before collecting the sample.

3. Collect "purged-line" or "flushed" samples in addition to the first draw samples for 10 percent or at least two of the fixtures being sampled. This provides a sample that has not been in contact with the plumbing system for an extended period of time. To collect this second sample, allow the tap to run for at least five minutes, then fill to the neck of the bottle or the fill line.

4. If results show lower levels of lead or copper in the first-draw sample than the flushed sample for the same fixture, the source of the lead or copper contamination is likely the fixture itself. If exceedances are happening in multiple fixtures and/or first draw and flushed samples are both high, the lead and copper contamination is most likely coming from components of the facility plumbing, such as pipes or fittings, or from a source outside the facility.

Sampling for Total Coliforms

1. Test all inventoried drinking water sources that are routinely used for drinking for total coliforms, except fixtures that are threaded and fixtures that have recently been repaired or replaced. In addition, test 5 percent or at least one of the fixture that are not routinely used for drinking, but where water could be accidentally ingested (e.g., showers, bathroom sinks). When sampling for total coliforms, remove any screens or aerators from the fixtures, unless otherwise instructed by the certified laboratory.

2. Clear the line by running cold water only at full force for at least 5 minutes. Reduce cold water flow to a clear stream with no bubbles. Fill the sample container to the neck of the bottle or the fill line.

Appendix C: Other Possible Tests Based on Visual Observations or Other Factors Table

Table 2.

Symptom	Description	Recommended Tests
Stained plumbing fixtures cooking utensils and/or laundry	Red or brown	Iron
	Reddish-brown slime	Iron bacteria
	Black	Manganese
	Green or blue	Copper
	Chalky white	Hardness
Off-color water	Cloudy	Turbidity, suspended solids
	Black	Hydrogen sulfide, manganese
	Brown or yellow	Iron, tannic acid
Unusual taste and odor	Rotten egg	Hydrogen sulfide
	Metallic	Ph, corrosion index, iron, zinc, copper, lead
	Salty	Total dissolved solids (TDS), chloride, sodium
	Septic, musty, earthy	Total coliform bacteria, methane
	Alkali, bitter	pH, total dissolved solids (TDS)
	Gasoline or oil	Hydrocarbon scan
	Soapy	Surfactants (surface-active agents)
Corrosive water	Deposits, pitting of plumbing fixtures	Corrosion index, pH, copper, lead
Radon	Undetectable by taste, smell, or sight. Potentially present in well water in regions noted for high radon levels	Radon

Appendix D. Acronym List

ATC	Air Traffic Control
ATO	Air Traffic Organization
CCR	Consumer Confidence Report
COR	Contracting Officer Representative
DMS	Directives Management System
EOSH	Environmental and Occupational Safety and Health
EPA	Environmental Protection Agency
EPS	Environmental Protection Specialist
FAA	Federal Aviation Administration
NPDWR	National Primary Drinking Water Regulations
OSHA	Occupational Safety and Health Administration
PIM	Program Implementation Manager
ppb	parts per billion
ppm	parts per million
PWS	Public Water System
SDWA	Safe Drinking Water Act