Aircraft Drinking Water Rule (ADWR) - Airline Perspective

Murky Water? Aircraft Drinking Water: Roles, Responsibilities and Requirements

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Outline

» Activity prior to the rule and after the ADWR – what has changed?

» Explanation of the aircraft potable water system

» Airline Requirements
  • Sampling
  • Reporting and recordkeeping

» Upstream public water system upsets
  » Timing, impact and how the airports can help
Aircraft Potable Water Supply and Transfer Chain

**EPA Jurisdiction:** Drinking water on board the aircraft.

**FDA Jurisdiction:** Water transfer to the aircraft (cabinets, carts, trucks, and hoses); and culinary water on board the aircraft.

**Primacy Agency Jurisdiction:** PWS serving the airport, or the airport itself (if it is a regulated PWS).

**Flight to Next Airport**

- **Galley Sink / Coffee**
- **Lavatory Sink**

**Aircraft Water System**
(Aircraft may empty and fill, or just top-off their water storage tank prior to departure)

**Watering Points**

- **Water Truck**
- **Water Cabinet** (Water cabinets are plumbed to the terminal)

**Foreign water not EPA/FDA regulated at airports or on aircraft outside of US.**

**EPA Region 9 Presentation**

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What did Airlines do before the ADWR?

Brief Background

» Aircraft potable water system disinfection and flushing is and has historically been a part of every airlines FAA approved aircraft maintenance program.

- Beginning in 1979, the EPA issued Water Supply Guidance-29 requiring carriers to have a separate operation and maintenance program to ensure safe drinking water.
- Revised guidance was issued in 1986 and carriers revised their programs to comply with the guidance.
- In 2003, EPA undertook a review of the aircraft drinking water program and decided to promulgate a new drinking water regulation specifically tailored to aircraft.
Aircraft public water systems are considered transient non-community water systems (TNCWS).

The airlines, through their FAA approved Aircraft Maintenance Program, have routine disinfection and flushing schedules for each aircraft.

The frequency of routine disinfection and flushing determines the routine sampling frequency.
Aircraft Potable Water System
Explanation (continued)

» Aircraft used by A4A members employ closed-loop water systems with various size water tanks depending on the aircraft make, model and configuration.

  » For example, Boeing 737 aircraft, which can hold up to approximately 140 passengers, typically have water tanks with a capacity between 20 and 60 gallons.

» Given the small size of aircraft water systems, water is replenished regularly.

» An aircraft water system is refilled by personnel using FDA-regulated equipment and approved refilling procedures. The potable water fill points used by the airlines are approved by the FDA.
Requirements

Sampling

» Each aircraft is sampled on a routine basis for Total Coliform by a trained sampler, either in-house or a third-party.

» This occurs at a limited number of locations.

» Samples are obtained from both the galley and the lavatory

• The same potable water tank serves both the galley and the lavatory fresh water supply
Requirements

Sampling Results

» If all of the samples come back as Total Coliform Negative, the aircraft continues on their routine sample schedule.

» If one or both of the samples test positive for Total Coliform, the sample is immediately analyzed for E. coli. At this point the aircraft goes under a corrective action.

» Corrective action may include one or all of these until a total coliform sample is received:
  • Disinfection and flushing
  • Resampling
  • Notifications

Note: This takes an enormous amount of coordination with scheduling.
EPA developed the Aircraft Reporting and Compliance System (ARCS) which airlines are required to use to upload data and notify EPA of all results.

ARCS provides a notification to the Airlines if there is a violation.

The airlines and EPA continue to work cooperatively to address issues with the ARCS database that do not match up with the rule which can cause a false violation.
Challenges
Upstream Public Water System Upsets

» ADWR Part 141.803 (h) Failure to board water from a safe watering point (E. coli positive) and 141.803 (i) Failure to board water from a safe watering point (non-E.coli positive) that the air carrier must perform corrective actions when it becomes aware of either an E. coli event or of a non-E. coli event when:

(1) Boarding water from a watering point not in accordance with FDA regulations (21 CFR part 1240 subpart E), or

(2) Boarding water that does not meet NPDWRs applicable to transient non-community water systems (§§ 141.62 and 141.63, as applied to TNCWS),

(3) Boarding water that is otherwise determined to be unsafe due to non-compliance with the procedures specified in § 141.804(b)(6).

What does this mean?
Challenges
Upstream Public Water System Upsets

» Stated previously, potable water boarded domestically is done at FDA approved watering points. A list of approved points can be found on the FDA website entitled Aircraft Watering Points and Servicing Areas Inventory
http://www.accessdata.fda.gov/scripts/AircraftWateringPoints/

» If a public water system that serves the airport has issued a boil water alert, this is usually conveyed to the airline through the local news or the airport. There is no notification system to the airlines if local water is not meeting NPDWRs

» Airlines have strict international potable water boarding protocols to ensure it is safe for human consumption
Challenges
Upstream Public Water System Upsets – Working with the Airports

» Our airline members would like to work with the airport community to identify the public water systems that serve the airport.

» Set up a framework to create a notification system.

» Since our member airlines operate the drinking water program from their corporate offices, more than local station management communication would likely be needed.
www.airlines.org