



Air Transport Association

June 25, 2009

VIA ELECTRONIC AND FIRST CLASS U.S. MAIL

Water Docket (ow-docket@epa.gov)
Environmental Protection Agency
Mail code: 2822T
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

**Re: Supplemental Comments of the Air Transport Association of America, Inc.
on EPA's Proposed Drinking Water Regulation for Aircraft Public Water
Systems, Docket ID No. EPA-HQ-OW-2005-0025**

On July 8, 2008, the Air Transport Association of America, Inc. ("ATA") submitted comments on the Environmental Protection Agency's ("EPA's" or the "Agency's") Proposed Drinking Water Regulations for Aircraft Public Water Systems ("Proposed Rule"). *See* Public Submission No. EPA-HQ-OW-2005-0025-0049.1 (hereinafter, "ATA's comments"). Included as Appendix A to ATA's comments on the Proposed Rule were a summary and analysis of water quality sampling data collected from eight of ATA's member carriers between October 12, 2007 and April 7, 2008, pursuant to the sampling and reporting requirements of the carriers' Administrative Orders on Consent ("AOC") with the Agency.

We now submit an update to Appendix A of ATA's comments that summarizes AOC sampling data from ATA carriers for all of calendar year 2008 and for January through March, 2009. In the preamble to the Proposed Rule that the AOC dataset was "incomplete" at the time of the proposal. 73 Fed. Reg. 19320, 19325 (Apr. 9, 2008). Given the lack of complete data, EPA committed to "continu[ing] to collect and analyze the aircraft sampling data for the 45 air carriers under the AOCs . . . to improve the Agency's understanding of aircraft drinking water quality relevant to microbiological controls." *Id.* at 19326. In any event, we continue to believe, as expressed in ATA's comments submitted last year, that the requirements of notice and comment rulemaking compel EPA to make such data and the Agency's analyses and conclusions associated with it available for public comment before a final rule is adopted. *See* ATA's comments at p. 27. Most importantly, consistent with the sampling data submitted in Appendix A to ATA's comments last year, the updated data, which represents the results of over 14,000 aircraft water samples, demonstrate that aircraft drinking water poses minimal health risks to passengers and crew. It is critical that the final rule promulgated by EPA reflect and account for this minimal level of risk as confirmed in the extensive carrier sampling and also provide sufficient flexibility to prevent unwarranted disruption of air service and burdensome costs for airlines and their passengers. *See id.* at pp. 22-27. Failure to fully and adequately incorporate

the results of this sampling into the substance of the final rule would constitute arbitrary and capricious agency action.

In addition to this general point, we also reiterate that it is imperative for EPA to consider the AOC sampling data with respect to two specific aspects of the Proposed Rule: (1) the location of total coliform sampling and associated required response measures, and (2) the frequency of disinfection. First, as in the AOC sampling data first provided in Appendix A, the attached 2008-09 data demonstrate exceedingly low percentages of coliform-positive samples at aircraft galley taps. *See id.* at pp. 53-54. Just 0.6% of the total number of galley samples collected in 2008-09 were total coliform positive. These results reinforce ATA's position that lavatory samples are not representative of the water quality in the aircraft drinking water system and instead reflect isolated and localized issues. Lavatory sampling, therefore, is not appropriate to include in the rule's sampling program unless no other sampling locations are available on the aircraft or the airline takes affirmative steps to offer water in the lavatories for drinking purposes (such as by providing drinking cups). *See id.* at 31-34. As pointed out in ATA's comments, such an approach is consistent with well-accepted sampling practice as well as specific EPA guidance with respect to the performance of coliform sampling, which discourages sampling at faucets where bacteriological contamination is likely, such as public restrooms. *Id.* at 33 n. 44.

Moreover, the data also reiterate that to the extent lavatory sampling remains part of the final rule, any system-wide remedial measures should be driven primarily by results obtained from galley sampling, as galley samples are the most representative of the aircraft drinking water system. In turn, the rule must allow for targeted and appropriate response actions to address lavatory concerns, such as restricting access to problematic taps, as proposed in our prior comments. *Id.* at 33. Tailoring response measures to the risks presented is critical to the development of a balanced and defensible final rule, because the most significant costs to the industry of the final rule will be embedded in the potential for disruption to service associated with the grounding of carrier aircraft to perform remedial measures. In addition, the proposed requirement to turn off water in response to a single total coliform positive sample would unduly and needlessly inconvenience passengers, especially on international operations, given the manifestly minimal health risk. Indeed, as currently written, ATA estimates that the Proposed Rule's disproportionate reliance on lavatory testing would require approximately five times more disinfection events than if the rule focused on the more appropriate indicator of aircraft water quality and potential risk: galley sample results. *Id.* at pp. 95-96. Considering the cost burden associated with the remedial disinfection requirements, focusing on the more relevant galley sampling plus fecal coliform results for the entire aircraft has the potential to cut the estimated \$7.3 million per year cost of remedial disinfection by as much as 80 percent. *See id.* at p. 96 and Appendix E.

Second, the AOC sampling results are also critical in establishing the routine disinfection schedule that is at the center of the AOC and the Proposed Rule's operation and maintenance requirements for aircraft drinking water systems. Specifically, the attached data indicate the appropriateness of a disinfection period that is consistent with the AOC schedule (which ranges up to 195 days) as opposed to the quarterly schedule in the Proposed Rule. Indeed, the approximately six months-worth of data submitted in Appendix A to ATA's comments last year showed that carriers disinfecting on a 180-day schedule had slightly better results than those who

disinfected quarterly. *See id.* at p. 47 n. 60. The complete 2008-09 data bear this out. Overall, there was no statistically significant difference between the total coliform positive sample results from carriers following a 180-day disinfection schedule in 2008-09 versus carriers on a 90-day disinfection schedule: 3.8% of samples tested positive for total coliform when a carrier was following a 90-day disinfection cycle, compared to 3.3% for those on a 180-day cycle.

As emphasized above, regulatory requirements must be commensurate with the health risk at which they are aimed. *See id.* at pp. 22-27. To date, EPA has not provided any data to support an argument that the proposed 90-day schedule is more protective than one of 180 days for a well-operated system. To the contrary, all available data and the carriers' experience under the AOCs strongly support the appropriateness of a disinfection schedule less frequent than 90 days. The 90-day disinfection schedule is especially disproportionate to the risks when one considers the costs associated with such frequent disinfection. Appendix E of ATA's comments demonstrated that the true cost of disinfection for the industry was over \$13 million. In addition, ATA carries estimate one-time costs of up to \$2 million to switch their current AOC disinfection schedules to the quarterly schedule of the Proposed Rule. Extending the disinfection interval to 180 days would reduce the annual cost burden of routine disinfection by half, making the regulatory burden for routine disinfection far more commensurate to the minimal risk involved. *See id.* at pp. 94-95. Accordingly, ATA reiterates its comment that the final rule provide for a default disinfection schedule of 180 days, with a provision whereby a carrier must convert to a 90-day schedule if its sampling results indicate that the 180-day schedule in the carrier's drinking water plan is not achieving the efficacy necessary to protect public health. *See id.* at 52.

For the reasons cited above, please accept the attached tables as an update to Appendix A in ATA's July 8, 2008 written comments. Should EPA have any questions regarding this submittal, please contact Tim Pohle, Managing Director, U.S. Environmental Affairs & Assistant General Counsel of ATA at 202-626-4216 or tpohle@airlines.org.

cc: Richard Naylor
Drinking Water Protection Division
Office of Ground Water and Drinking Water (MC-4606M)
Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460
e-mail address: naylor.richard@epa.gov.

Appendix A: Sample Data Summary

The Air Transport Association of America, Inc. (ATA) collected water quality data from eight airline carriers. These data were previously submitted to U.S. EPA as part of their Appendix J submissions under their respective Administrative Orders on Consent with the Agency. ATA combined the data into a digital database and queried for various analyses.

General summaries of the data are presented in the following tables, along with specific categorizations of results of particular interest. ATA will make this database available to EPA upon request.

The first table contains data collected from eight carriers from 10/12/07 to 04/07/08 and was submitted on July 8, 2008 as Appendix A to ATA's comments on the Proposed Drinking Water Regulation for Aircraft Public Water Systems.

The second table contains data collected from eight carriers for calendar year 2008 and for five carriers for January through March, 2009.

Preliminary Summary of Data from 2008 Appendix I Submittals:

Overall Testing:

	Quantity	Overall Percentage	Percentage of Positive Total Coliform
No. of Sampling Events	10,390	100%	-
No. of Positive Total Coliforms	380	3.7%	100.0%
No. of Positive E. Coli	17	0.2%	4.5%
No. of Positive Total Coliforms and Positive E. Coli	17	0.2%	4.5%
No. of Positive Total Coliforms @ Lavatory	292	2.8%	76.8%
No. of Positive Total Coliforms @ Galley	66	0.6%	17.4%

Aircraft (A/C) Based Results:

	Quantity	Percentage	Percentage of A/C with Positive Total Coliform
No. of A/C Tested	2,552	100%	-
No. of A/C with Positive Total Coliforms	276	10.8%	100.0%
No. of A/C with Positive E. Coli	14	0.5%	3.7%
No. of A/C with Positive Total Coliforms and Positive E. Coli	14	0.5%	3.7%
No. of A/C with Positive Total Coliforms @ Lavatory	256	10.0%	67.4%
No. of A/C with Positive Total Coliforms @ Galley	50	2.0%	13.2%

Post-Disinfection Samples

	Total		Galley		Lavatory		Composite or N/A	
	Quantity	Percentage	Quantity	Percentage	Quantity	Percentage	Quantity	Percentage
No. of Samples	3,770	100.0%	1,733	100.0%	1,813	100.0%	224	100.0%
No. of Samples with Positive Total Coliform	108	2.9%	25	1.4%	67	3.7%	16	7.1%
No. of Samples with Negative Total Coliform	3,662	97.1%	1,708	98.6%	1,746	96.3%	208	92.9%

Repeat Samples:

	Total		Galley*		Lavatory*		Composite or N/A	
	Quantity	Percentage	Quantity	Percentage	Quantity	Percentage	Quantity	Percentage
No. of Samples	381	100.0%	182	100.0%	183	100.0%	16	100.0%
No. of Samples with Positive Total Coliform	40	10.5%	6	3.3%	29	15.8%	5	31.3%
No. of Samples with Negative Total Coliform	337	88.5%	174	95.6%	152	83.1%	11	68.8%

*There were 4 observations without a reported Total Coliform Result, 2 in the Galley and 2 in the Lavatory.

Comparison of Total Coliform Results of Carriers with Different Disinfection Periods:

	Total Samples Collected	Positive TC Hits	
		Quantity	Percentage
Carriers with Disinfection Periods below 90 days	6,847	259	3.8%
Carriers with Disinfection Periods of 125 days	410	17	4.1%
Carriers with Disinfection Periods of 180 days	3,133	104	3.3%

Summary of Data from ALL (2008 and 2009) AOC Appendix I Submittals:

Overall Testing:

	Quantity	Overall Percentage	Percentage of Positive Total Coliform
No. of Sampling Events	14,635	100%	-
No. of Positive Total Coliforms	525	3.6%	100.0%
No. of Positive E. Coli ¹	23	0.2%	4.4%
No. of Positive Total Coliforms and Positive E. Coli ¹	21	0.1%	4.0%
No. of Positive Total Coliforms @ Lavatory ²	401	2.7%	76.4%
No. of Positive Total Coliforms @ Galley ²	86	0.6%	16.4%

Aircraft (A/C) Based Results:

	Quantity	Percentage	Percentage of A/C with Positive Total Coliform Observations
No. of A/C Tested	3,748	100%	-
No. of A/C with Positive Total Coliforms	349	9.3%	100.0%
No. of A/C with Positive E. Coli	20	0.5%	5.7%
No. of A/C with Positive Total Coliforms and Positive E. Coli	18	0.5%	5.2%
No. of A/C with Positive Total Coliforms @ Lavatory ³	301	8.0%	86.2%
No. of A/C with Positive Total Coliforms @ Galley ³	66	1.8%	18.9%

Notes:
 1. Two observations reported positive E. Coli results and negative total coliform.
 2. Some sampling event locations were not recorded.
 3. Some aircraft tested positive in the galley and the lavatory.
 4. Four observations (2 galley/lavatory) had no reported total coliform result.

Post-Disinfection Samples

	Total		Galley		Lavatory		Composite or N/A	
	Quantity	Percentage	Quantity	Percentage	Quantity	Percentage	Quantity	Percentage
No. of Samples	4,235	100.0%	1,880	100.0%	1,937	100.0%	418	100.0%
No. of Samples with Positive Total Coliform	133	3.1%	30	1.6%	74	3.8%	29	6.9%
No. of Samples with Negative Total Coliform	4,102	96.9%	1,850	98.4%	1,863	96.2%	389	93.1%

Repeat Samples:

	Total		Galley ⁴		Lavatory ⁴		Composite or N/A	
	Quantity	Percentage	Quantity	Percentage	Quantity	Percentage	Quantity	Percentage
No. of Samples	655	100.0%	298	100.0%	330	100.0%	27	100.0%
No. of Samples with Positive Total Coliform	62	9.5%	7	2.3%	47	14.2%	8	29.6%
No. of Samples with Negative Total Coliform	589	89.9%	289	97.0%	281	85.2%	19	70.4%

Comparison of Total Coliform Results of Carriers with Different Disinfection Periods:

	Total Samples Collected	Positive TC Hits	
		Quantity	Percentage
Carriers with Disinfection Periods below 90 days	7,852	299	3.8%
Carriers with Disinfection Periods of 125 days	2,387	50	2.1%
Carriers with Disinfection Periods of 180 days	3,133	104	3.3%