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ENVIRONMENTAL HEALTH BUREAU

POTABLE WATER MANAGEMENT PLAN

AUDIT GUIDE

June 2011



*Travelling Public Program/
Le Programme du public voyageur*

Canada 

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1.0 INTRODUCTION

The *Potable Water Regulations for Common Carriers* under the *Department of Health Act* require that conveyance operators, including airline operators, provide potable water for drinking or culinary purposes on their conveyances. It also authorizes Health Canada to inspect potable water and potable water systems on a conveyance.

Health Canada, members of the airline industry and the Air Transport Association of Canada have collaborated to develop and put in place, two processes to address potable water on aircraft. First, a routine water testing/sampling program was introduced in June 2006 with the purpose of monitoring bacteriological quality of the water on aircraft. Second, the “Health Canada Standard for the Development of a Potable Water Management Plan for Airlines (PWMP)” was introduced in September 2006 to guide the development of airline-specific potable water management plans. These plans have now been developed and accepted by Health Canada. These airline specific plans will now form the basis for an audit program, which will be introduced in 2008.

This draft Potable Water Management Plan, Audit Guide (herein called the Audit Guide) is the next step in the process.

2.0 AUDIT PROCESS

This Audit Guide has been developed for use by Health Canada and the airline industry to assess an individual airline’s compliance with its Health Canada-accepted PWMP. The Audit Guide covers the components and elements contained in the “Health Canada Standard for the Development of a Potable Water Management Plan for Airlines”, which was developed by Health Canada in consultation with the Air Transport Association of Canada (ATAC) in 2006.

2.1 Health Canada Audit Process for Potable Water on Aircraft

An initial audit of an individual airline’s compliance with its own PWMP will be conducted by Health Canada approximately six (6) months after the plan has been accepted by Health Canada and implemented by the airline. If the initial audit meets the requirements (see section 3.0), Health Canada will perform the next audit one (1) year later and should this audit also meet the requirements consideration will be given to extending the next audit to 2 years on a case by case basis. Should the initial audit not meet the requirements, Health Canada will perform a second audit within six (6) months after the initial audit or earlier depending on the risk imposed by the deficiencies found during the audit.

As well, Health Canada will take measures (request information, inspect, investigate or audit) outside of these timeframes if there is a complaint, evidence of a health risk or a significant change in airline procedures etc. relevant to potable water.

2.2 Elements of the Audit

Health Canada will notify the airline 30 days in advance of the audit. The audit will be comprised of: document review, site visit, and interviews with relevant personnel.

- **Document Review**

At the time of notification Health Canada will identify the documents (policies, procedures) and supporting materials required for the audit. These will be made available to Health Canada by the airline at the time of the audit.

If requested documentation is not available at the time of the audit and the airline is unable to provide an acceptable explanation, Health Canada will consider the airline to have failed the audit. This will be reported to the airline and Health Canada will negotiate the time and conditions of a subsequent audit.

- **Site Visits**

Health Canada will conduct on site visits. The site visit will occur at the airline's headquarters and/or to other maintenance centres operated by the airline where potable water activity is occurring. The site visit(s) will include the following three stages for the purpose of gathering information:

1. Review of requested documentation;
2. Interviews with personnel with responsibilities for potable water;
3. Physical inspection/observations – Site walk through – may include observing an aircraft, water truck/cart disinfection/sanitization, etc.

3.0 EVALUATION

After the collection of audit information – documents review, observations/comparisons to PWMP, inspection is complete; the process of evaluation makes use of the PWMP element requirements outlined in Tables B1 – B6 which relate to an element being assessed.

Each assessed component and element will be assigned a **meets or does not meet requirements**.

Requirements are assessed in the following manner:

- a) **Does not meet requirements:** the organization does not have all of applicable requirements. The requirements may not be documented and not implemented, may be partially implemented but not effective.

OR

- b) **Meets requirements:** meets the acceptable standard of audit.

Meets/does not meet Requirements

The PWMP must meet the requirement(s) of each component and element otherwise the PWMP is deficient in that component/element and does not meet the requirements and the airline will have failed the audit.

The auditor may also make recommendations based on their site visit. Recommendations are items that the auditor considers would improve a particular element or component of the PWMP. These recommendations may or may not necessitate a follow-up visit.

Should the audit identify deficiencies Health Canada will provide recommendations on the identified deficiencies and the airline must provide a written corrective action plan within 30 days after receiving the audit report.

Health Canada will conduct a follow-up audit limited to those deficiencies at a time negotiated with the airline – not to exceed 90 days. As well, a full audit will be conducted 6 months from the original audit.

Health Canada will continue to conduct routine and/or random potable water sampling on aircraft where the audit was not successful. As well Health Canada retains the right under the “Potable Water Regulations for Common Carriers” to conduct sampling at any time.

4.0 AUDIT REPORT

The audit report will be completed by Health Canada within 30 days of the audit and provided to the identified airline representative. The report will include meets \ does not meet requirements for each element and component observed and may contain recommendations or comments based on the findings.

5.0 APPEAL

The airline may appeal the results of the audit in writing to the Manager Travelling Program, Environmental Health Bureau within 10 working days of receipt of the audit report. Health Canada will respond to the appeal within 10 working days.

*Travelling Public Manager
Health Canada, Environmental Health Bureau
11th Floor, Room 1111, AL 4111A
99 Metcalfe Street
Ottawa, Ontario K1A 0K9
Or FAXED to (613) 960-4540*

Email: phb_bsp@hc-sc.gc.ca

Health Canada Audit

Auditor Name: _____

Date of Audit: _____

Reason for Audit: _____

Last Audit Date: _____

Last Audit Results: Meets Requirements Does Not Meet Requirements

Airline Company Name: _____

Name of Airline Company Representative: _____

Address of Company: _____

Send Audit Report To: _____

Name: _____

Address: _____

Table A – PWMP Audit Guide Framework	
Component	Element
1. Potable Water Management Plan	1.1 Safety Policy
	1.2 Roles and Responsibilities
	1.3 Operational requirements
	1.4 Sampling Procedure
	1.5 Disinfection/sanitization of aircraft system
	1.6 Communication
	1.7 Complaint Log
2. Documentation	2.1 Identification and Maintenance of Applicable Legislation/ Regulations and Guidelines
	2.2 PWMP Documentation
	2.3 Records Management
3. Adverse Results	3.1 Process
4. Training	4.1 Training, Awareness and Competence
5. Quality Assurance	5.1 Operational Quality Assurance
6. Incident/Event	6.1 Response Plan

AUDIT GUIDE REQUIREMENTS

Table B1 – Potable Water Management Plan

N/A

COMPONENT	1. POTABLE WATER MANAGEMENT PLAN	
ELEMENT	1.1 Safety Policy	
REQUIREMENTS		
	<ul style="list-style-type: none"> • The PWMP makes reference to the airline's Safety Management System. 	
	<ul style="list-style-type: none"> • The airline's PWMP defines the purpose of the program. 	
	<ul style="list-style-type: none"> • A single PWMP is established by the airline and includes all its applicable maintenance centers. 	
ELEMENT	1.2 Roles and Responsibilities	
REQUIREMENTS		
	<ul style="list-style-type: none"> • An airline company representative has been appointed with responsibility and accountability for ensuring that the PWMP is implemented and performing to requirements in all areas of the organization. 	
	<ul style="list-style-type: none"> • The person appointed to manage the operation of the PWMP fulfills the required job functions and responsibilities. 	
	<ul style="list-style-type: none"> • All personnel understand their authorities, responsibilities and accountabilities in regards to the task card requirements. 	
	<ul style="list-style-type: none"> • The PWMP responsibilities and accountabilities are reviewed after significant organizational change. 	
	<ul style="list-style-type: none"> • Responsibilities and accountabilities of personnel assigned to the task cards for the PWMP at all levels of the airline company are defined and documented. 	
	<ul style="list-style-type: none"> • Where applicable, there are documented organizational diagrams, and job descriptions. 	
	<ul style="list-style-type: none"> • There is a logical flow within organizational authorities, responsibilities and accountabilities for the PWMP. 	
ELEMENT	1.3 Operational Requirements	
REQUIREMENTS		
	<ul style="list-style-type: none"> • There is an up to date inventory of company owned equipment i.e. aircraft, water trucks/carts. 	
	<ul style="list-style-type: none"> • There is an up to date inventory of airports where aircraft board potable water. 	
	<ul style="list-style-type: none"> • Where applicable there is an up to date list of contractors who board potable water for airline. 	
	<ul style="list-style-type: none"> • Where applicable there is an up to date list of airline operated potable water cabinets and filling stations with locations identified. 	
	<ul style="list-style-type: none"> • Where applicable there are agreements in place with contractors that indicate the requirement to comply with the airline's PWMP. 	
	<ul style="list-style-type: none"> • There is a Standard Operating Procedure (SOP) in place for disinfection/sanitization of potable water system of leased equipment returning into service from maintenance or new equipment (e.g. aircraft, water truck/cart etc.) when initially put into service or returning into operation. 	
	<ul style="list-style-type: none"> • All watering points (airports, filling stations, water trucks/carts and PWC) are from a potable water source. 	
	<ul style="list-style-type: none"> • Where applicable there are agreements in place with the airports to comply with the airline's PWMP. 	
	<ul style="list-style-type: none"> • When a contractor is used for aircraft sanitization/disinfection there should be signed agreements/contracts indicating that the sanitization/disinfection will be performed as per manufacturer requirements. 	
	<ul style="list-style-type: none"> • Where applicable should the airline make their own ice they must have an SOP for the maintenance and sanitization/disinfection of equipment. 	

ELEMENT	1.4 Sampling Procedure
REQUIREMENTS	
•	The microbiological parameters to be sampled are identified in the PWMP.
•	The interpretation of results and the guidelines used are included in the PWMP.
•	Where applicable, frequency of sampling for company owned aircraft, water trucks/carts, filling stations and PWC, are included in the PWMP.
•	There is a sampling protocol which includes but not limited to: procedures for taking samples, storage, handling, transportation, delivery, how to fill out chain of custody form etc.
•	Person(s) responsible for sampling follows the task card requirements.
•	The laboratory used for analysis is accredited and/or approved by the province/territory.
•	The airline has a satisfactory monitoring program for water sampling.
•	Should the airline make their own ice they must have a sampling program.
•	Where applicable the airline has a satisfactory monitoring program for ice.
ELEMENT	1.5 Disinfection/sanitization of aircraft system and water trucks/carts
REQUIREMENTS	
•	Disinfection/sanitization of aircraft and equipment is performed on a regular cycle and/or as needed (i.e. adverse results, boarding contaminated potable water).
•	A process is in place to stop the boarding of contaminated water when boil water advisory/order has been issued, etc.
•	Disinfection/sanitization of water trucks/carts etc. performed on a regular cycle or as needed (i.e. adverse results, contaminated potable water etc.).
•	Disinfection/sanitization of hoses performed on a regular basis.
•	Test kits or other suitable alternative are available that are specific to the disinfectant type and capable of measuring the required concentration and used as per manufacturer's specifications.
•	There are SOPs for disinfection/sanitization, use of testing and disinfection/sanitization equipment and these are made available at each applicable maintenance centre.
•	Review disinfection/sanitization records of equipment on a regular basis.
ELEMENT	1.6 Communication
REQUIREMENTS	
•	There is an internal and external communication plan for adverse results.
•	Where applicable there are communication processes in place with external partners i.e. airport, third party contractors that permit the PWMP to function effectively.
•	There is a communication plan in place with the laboratory to notify the responsible company representative of an adverse result.
•	Adverse results are communicated in a timely manner as required to Health Canada contact, aircraft and maintenance for action.
•	There is an established means of inter-departmental communication to spread information on PWMP related matters.
•	Employees responsible for potable water are informed as to who is their primary contact for PWMP related matters.
ELEMENT	1.7 Complaint Log
REQUIREMENTS	
•	The airline has a complaint log for passenger and crew and a Standard Operating Procedure (SOP) has been developed for responding to complaints.
•	There is a process to record post flight complaints.
•	Complaints are investigated and when required acted upon.
•	Recommendations are followed-up.

Table B2 – Documentation

N/A

COMPONENT	2. DOCUMENTATION	
ELEMENT	2.1 Identification and Maintenance of Applicable Legislation/Regulations and Guidelines	
REQUIREMENTS		
	<ul style="list-style-type: none"> Legislative requirements and guidelines are referenced in the PWMP and where they can be located. 	
	<ul style="list-style-type: none"> A documented procedure has been established and maintained for identifying applicable regulatory requirements. 	
	<ul style="list-style-type: none"> Acts, regulations and guidelines are periodically reviewed to ensure that the most current information is available. 	
	<ul style="list-style-type: none"> All pertinent technical and regulatory information is readily accessible by personnel. 	
	<ul style="list-style-type: none"> The organization has defined specific triggers that would lead to a review of the company documentation 	
ELEMENT	2.2 PWMP Documentation	
REQUIREMENTS		
	<ul style="list-style-type: none"> The information resides or is incorporated by reference into approved documentation, such as Company Operations Manual, Maintenance Control Manual, as applicable, and where these approved documents are not required by regulation, the organization includes the information in a separate, controlled document. 	
	<ul style="list-style-type: none"> The consolidated documentation is readily accessible by personnel. 	
	<ul style="list-style-type: none"> Manuals or controlled electronic media are used to document the plan. 	
	<ul style="list-style-type: none"> There is a process to periodically review the PWMP documentation to ensure its continuing suitability, adequacy and effectiveness, and that changes to the plan have been implemented. 	
	<ul style="list-style-type: none"> The plan is documented in suitable company media at both the corporate and operational level. 	
	<ul style="list-style-type: none"> Documents show lines of authority, accountability and responsibility at the corporate level of management. 	
	<ul style="list-style-type: none"> Acceptable means of documentation include, but are not limited to, organizational charts, job descriptions and other descriptive material that define and clearly delineate the plan's authority and responsibility within the organization for the PWMP to operate safely. 	
	<ul style="list-style-type: none"> The airline company has a process to identify changes within the organization that could affect the company documentation. 	
ELEMENT	2.3 Records Management	
REQUIREMENTS		
	<ul style="list-style-type: none"> The airline company has a records system that ensures the generation and retention of all records necessary to document and support operational requirements of the PWMP. These should be retained on file for 5 years and then archived. 	
	<ul style="list-style-type: none"> The system provides the control processes necessary to ensure appropriate identification, legibility, storage, protection, archiving, retrieval, retention time and disposition of records. 	
	<ul style="list-style-type: none"> The organization has a policy that defines how long records that are not specifically required by regulations are kept. 	
	<ul style="list-style-type: none"> There are records identifying aircraft, trucks/carts, sampling points, water sampling results, action taken on adverse results, disinfection/sanitization dates, etc. 	
	<ul style="list-style-type: none"> Where applicable there are records for ice identifying sampling points, water sampling results, action taken on adverse results, disinfection/sanitization dates, etc. 	

Table B3 – Adverse Results

N/A

COMPONENT	3. ADVERSE RESULTS
ELEMENT	3.1 Process
REQUIREMENTS	
•	The PWMP lists the procedures to be taken for adverse results and they are being followed.
•	There is a process in place to monitor and analyze trends (e.g. same aircraft with multiple adverse results etc.) and these are documented.
•	There is a process to ensure that all adverse results reported are analyzed to identify contributing and root causes.
•	Corrective/preventive actions, including timelines, are documented in the appropriate equipment (i.e. aircraft, water truck/cart etc.) record keeping documents.
•	The airline has a process for evaluating the effectiveness of the corrective/preventive measures that have been developed.

Table B4 – Training

N/A

COMPONENT	4. TRAINING
ELEMENT	4.1 Training, Awareness and Competence
REQUIREMENTS	
•	The PWMP training program falls within the corporate training program for aircraft maintenance.

Table B5 – Quality Assurance

N/A

COMPONENT	5. QUALITY ASSURANCE – IN PERSON REVIEW
ELEMENT	5.1 Operational Quality Assurance
REQUIREMENTS	
•	A quality assurance program is established and maintained.
•	There is a person responsible for quality assurance program.
•	The PWMP is reviewed at least annually or when changes occur. This is documented.
•	There exists an operationally independent audit function with the authority required to carry out an effective internal evaluation program.
•	The organization conducts reviews and audits of its processes, its procedures, analyses, inspections and training.
•	The organization has a system to monitor for completeness the internal reporting process and the corrective action completion.
•	There is a procedure for reporting audit results and maintaining records.
•	There is a procedure outlining requirements for timely corrective and preventive action in response to audit results.
•	There is a procedure to record verification of action(s) taken and the reporting of verification results

Table B6 – Incident/Event

N/A

COMPONENT	6. INCIDENT/EVENT	
ELEMENT	6.1 Response Plan	
REQUIREMENTS		
	<ul style="list-style-type: none"> The airline company has an incident/event response plan procedure for when adverse results are received, when advised by potable water providers of adverse water results, when notified by airport of boil water advisories/orders, when potable water can not be supplied to aircraft due to events beyond the control of the airline. 	
	<ul style="list-style-type: none"> The incident/event response plan procedures have been periodically reviewed as a part of the management review and after key personnel or organizational change. 	
	<ul style="list-style-type: none"> The incident/event response plan includes an assessment for Personal Protective Equipment (PPE). 	
	<ul style="list-style-type: none"> The organization has a process to distribute the incident/event procedures and to communicate the content to all personnel. 	
	<ul style="list-style-type: none"> The organization advises Health Canada of adverse results and any other affected organization (e.g. contractors) of adverse results and action to be taken. 	
	<ul style="list-style-type: none"> The airline has key personnel identified in their plan as to who should be notified of adverse results and action to be taken. 	
	<ul style="list-style-type: none"> A procedure exists for recording activities during the notification, incident/event period. 	
	<ul style="list-style-type: none"> The airline has an action plan to provide bottled water or an alternative when there are incidents/events. 	
	<ul style="list-style-type: none"> When applicable there is an SOP for the delivery, storage and stock rotation of bottled water. 	

Table C – PWMP Table

COMPONENTS	ELEMENT	Meets Requirements	Does Not Meet Requirements
1. Potable Water Management Plan	1.1 Safety Policy		
	1.2 Roles and Responsibilities		
	1.3 Operational Requirements		
	1.4 Sampling Procedure		
	1.5 Disinfection/Sanitization of Aircraft System and Water Truck/Cart		
	1.6 Communication		
	1.7 Complaint Log		
2. Documentation	2.1 Identification and Maintenance of Applicable Legislation/Regulations and Guidelines		
	2.2 PWMP Documentation		
	2.3 Records Management		
3. Adverse Results	3.1 Process		
4. Training	4.1 Training Awareness and Competence		
5. Quality Assurance	5.1 Operational Quality Assurance		
6. Incident / Event	6.1 Response Plan		

PWMP Meets Requirements	
Yes	No

Appendix 1 – List of Documentation Requested

DOCUMENTATION REVIEW
Airline's PWMP
Aircraft Maintenance Manual pertaining to potable water system for each specific aircraft make in the fleet
Task cards pertaining to potable water for each specific aircraft make in the fleet
Water truck/cart Maintenance Manual pertaining to potable water
Inventory of aircraft, water trucks/carts, filling stations, Potable Water Cabinets owned/operated by the airline
All records for maintenance, water sampling/test results, chlorine residual, spreadsheets of equipment: aircraft, water trucks/carts, filling stations, Potable Water Cabinets owned/operated by the airline
SOP=s pertaining to potable water - aircraft, water trucks/carts, testing and disinfection/sanitization equipment, water sampling, Chain of Custody and Sampling Data Sheets for water sampling
Contracts/agreements with labs, third party potable water suppliers, aircraft maintenance contractors for potable water
Complaint logs pertaining to potable water
Airline=s communication plan for potable water
Quality control/assurance reports for potable water management
Any previous internal/external audit reports pertaining to potable water
Water sampling results and maintenance records for 3 rd party servicing stations

NOTE: The above list is not all inclusive and the auditor may request additional documentation during the audit process.

