

DEPARTMENT OF THE AIR FORCE
Headquarters US Air Force
Washington, DC 20330-1030

AFQTP 4B071-15
1 December 2014
Certified Current, 19 March 2024

AIR FORCE SPECIALTY CODE 4B071 BIOENVIRONMENTAL ENGINEERING

Potable Water Program



QUALIFICATION TRAINING PACKAGE

Accessibility: *Publications and forms are available on the e-publishing website at <http://www.e-publishing.af.mil> for downloading or ordering.*

Releasability: *There are no releasability restrictions on this publication.*

Table of Contents

STS Line Item 4.15.1.13: Perform base sanitary surveys	1
TRAINER GUIDANCE	1
TASK STEPS	2
TRAINEE REVIEW QUESTIONS.....	4
PERFORMANCE CHECKLIST	6
ANSWERS	7
STS Line Item 4.15.1.15: Perform water vulnerability assessments	9
TRAINER GUIDANCE	9
TASK STEPS	10
TRAINEE REVIEW QUESTIONS.....	12
PERFORMANCE CHECKLIST	13
ANSWERS	14
STS Line Item 4.15.1.16: Perform aircraft watering point survey (Bacteriological Analysis)	15
TRAINER GUIDANCE	15
TASK STEPS	16
TRAINEE REVIEW QUESTIONS.....	17
PERFORMANCE CHECKLIST	18
ANSWERS	19

STS Line Item 4.15.1.13: Perform base sanitary surveys

TRAINER GUIDANCE

Proficiency Code:	3c
PC Definition:	Can do all parts of the task. Needs only a spot check of completed work. Can identify why and when the task must be done and why each step is needed.
Prerequisites:	None
Training References:	<ul style="list-style-type: none"> • USAFSAM, <i>Drinking Water Surveillance Technical Guide</i>, 2011 • AFI 48-144IC-1, <i>Safe Drinking Water Surveillance Program</i>, Sep 2010 • Drinking Water System Sanitary Survey Checklist for Overseas Installations, 2012 • TB MED 577/NAVMEDP-5010-10/AFMAN48-138 IP
Additional Supporting References:	40 CFR 142, <i>National Primary Drinking Water Regulations Implementation</i>
CDC Reference:	4B051
Training Support Material:	<ul style="list-style-type: none"> • Water system data information files • Historical monitoring data
Specific Techniques:	Conduct hands-on training and evaluation. The trainer should conduct a mock sanitary survey with the trainee.
Criterion Objective:	Given water system data information files and historical monitoring data for the installation drinking water system, conduct a sanitary inspection successfully completing all checklist items with NO trainer assistance.
<p>Notes:</p> <p>40 CFR 142.2 defines a sanitary survey as “an onsite review of the water source, facilities, equipment, operation and maintenance of a public water system for the purpose of evaluating the adequacy of such source, facilities, equipment, operation, and maintenance for producing and distributing safe drinking water.” Note: For a better understanding of the differences and similarities of a sanitary survey and WVA, see USAFSAM Technical Guide <i>Drinking Water Surveillance Technical Guide (DRAFT)</i>, Section 5, for information that contrasts the two surveys. This guide is available on the ESOH Service Center AFMS Knowledge Exchange web site.)</p> <p>In most cases the state has primacy and will conduct the sanitary survey. In those instances where the state is not conducting a sanitary survey, BE must complete the survey. Completing sanitary surveys at Air Force overseas installations is in most cases is the responsibility of BE. Installations outside the United States and its territories must follow country-specific Environmental/Final Governing Standards (EGS/FGS) and/or the Overseas Environmental Baseline Guidance Document (OEBGD) (DoD 4715.5-G) as applicable, and implement AFI 48-144 in compliance with the OEBGD and EGS/FGS. Installations located in areas where no EGS/FGS exists must follow the OEBGD. Off-installation surveys must be coordinated with host nation authorities.</p> <p>The process of conducting a sanitary survey can vary by location, depending on system specific variables, but certain basic components must be evaluated in all situations. Three phases are necessary in completing a sanitary survey: Pre-survey Planning, On-site survey, and Reporting. This Training Module addresses the first two phases.</p> <p>Safety is an important consideration when conducting field surveys. Potential safety hazards include confined space issues, falls or scrapes when climbing tanks, and insect bites.</p>	

TASK STEPS

1. Prepare for the survey by thoroughly reviewing the water system information files and historical data.¹
2. Identify and list previous problem areas and solutions.²
3. Coordinate with required additional offices for subject matter expertise.³

Conduct the on-site survey⁴

4. Conduct a source water evaluation.⁵
5. Conduct treatment system evaluation.⁶
6. Conduct distribution system evaluation.⁷
7. Conduct finished water storage evaluation.⁸
8. Conduct pump/pump facility and control evaluation.⁹
9. Conduct monitoring, reporting and data verification evaluation.¹⁰
10. Evaluate water system operation and management.¹¹
11. Evaluate operator compliance with state requirements.¹²

LOCAL REQUIREMENTS:

NOTES:

1. Information that should be collected includes the treatment in place, monitoring requirements and procedures, the compliance history of the facility, and the condition of the system during the previous sanitary survey. Sources of information/data to be reviewed includes: previous sanitary surveys, additional correspondence, water system plans, chemical and microbiological sampling results, operating reports, and engineering studies. This information is used to identify questions to ask and assessment criteria to apply during the onsite survey.
2. Points to address include whether the system is in compliance with all monitoring requirements and determining whether the system is in compliance with all applicable maximum contaminant levels (MCL).
3. Personnel for SME can be located using the Sanitary Survey Master Listing located in the Drinking Water Sanitary Survey Checklist.
4. Includes visiting the water supply source and source facilities, pump stations, the treatment process, storage facilities, distribution system, and sampling locations. One of the most important functions of the on-site portion of the survey is to determine whether the existing facilities are adequate to continue to provide reliable supply water that continuously meets Federal standards and any State standards or requirements. The on-site visit should include review and verification of the capability and capacity, construction and operation, and physical condition of the water system's facilities. There are eight essential elements:
 - Element 1 - Source water evaluation
 - Element 2 - Water treatment evaluation
 - Element 3 - Distribution system evaluation
 - Element 4 - Finished water storage evaluation
 - Element 5 - Pump and pump facility evaluation
 - Element 6 - Monitoring, reporting, and data evaluation
 - Element 7 - Operations and management evaluation
 - Element 8 - Operator compliance with state requirements

5. Review the major components of the source to determine reliability, quality, quantity, and vulnerability. Determine and evaluate data that define the potential for degradation of the source water quality.
6. The treatment facilities and processes should be evaluated to determine their ability to meet regulatory requirements and to provide an adequate supply of safe drinking water at all times, including periods of high water demand. That should be evaluated include design, operation, maintenance, and management of the water treatment plant to identify existing and potential sanitary risks. The sanitary survey should evaluate all areas of the treatment process and identify features of the treatment process that may pose a sanitary risk.
7. Review system schematics, operation and maintenance records, standard operating procedures, construction standards, and distribution system water quality data.
8. Verify the water system file information identified during the pre-survey review, to assess the tank's structural condition, operational readiness, site security, and potential sanitary risks. Check that maintenance identified during storage facility inspections has been completed.
9. The objective of surveying the pumps/pump facilities and controls is to determine that water supply pumping facilities are reliable; and recognize any sanitary risks attributable to water supply pumping facilities. Review the design, uses, and major components of water supply pumps; evaluate the operation and maintenance as well as safety practices.
10. Review the water quality monitoring plan of the public water system for conformance with regulatory requirements. Verify that the water quality monitoring plan is being followed by checking test results. Verify that all in-house testing as well as equipment and reagents being used conform to accepted test procedures. Consider whether any changes in monitoring frequency or location should be recommended for any contaminant or performance measure. Verify the data submitted to the regulatory agency. Evaluate the procedures an operator follows to identify any problems with the process, determine the changes needed to correct the problem, and how adjustments to the process are approved and performed as needed.
11. Review the water quality goals and evaluate any plan(s) the system has to either accomplish or maintain the stated goals. Identify and evaluate the basic information on the system, management, staffing, operations, and maintenance. Review and evaluate the plan(s) for safety, emergency situations, maintenance, and security to maintain system reliability. Evaluate the system's revenue and budget for drinking water to establish the long-term viability of meeting water quality goals.
12. Assess the competency of operators. When evaluating the operators it is important to know if the employees can operate and maintain equipment, if there are and adequate number to do so, and is this being completed. Also evaluate certifications for each operator and the frequency of there re-certification.

TRAINEE REVIEW QUESTIONS

STS Line Item 4.15.1.13: Perform base sanitary surveys

1. Why are sanitary surveys performed?

2. What is the purpose of evaluating the system management and operation?

3. What are the similarities and differences between a Sanitary Survey and a WVA?

Sanitary Survey vs. Water Vulnerability Assessment	
Similarities	Differences

4. A sanitary survey of a treatment facility should include what?

PERFORMANCE CHECKLIST

STS Line Item 4.15.1.13: Perform base sanitary surveys

Proficiency Code:	3c
PC Definition:	Can do all parts of the task. Needs only a spot check of completed work. Can identify why and when the task must be done and why each step is needed.

DID THE TRAINEE...		YES	NO
1. Prepare for the survey by thoroughly reviewing the water system information files and historical data?			
2. Identify and list previous problem areas and solutions?			
3. Coordinate with required additional offices for subject matter expertise?			
CONDUCT THE ON-SITE SURVEY			
4. Conduct a source water evaluation?			
5. Conduct treatment system evaluation?			
6. Conduct distribution system evaluation?			
7. Conduct finished water storage evaluation?			
8. Conduct pump/pump facility and control evaluation?			
9. Conduct monitoring, reporting and data verification evaluation?			
10. Evaluate water system operation and management?			
11. Evaluate operator compliance with state requirements?			
Did the trainee successfully complete the task?			

 TRAINEE NAME (PRINT)

 TRAINER NAME (PRINT)

ANSWERS

1. Why are sanitary surveys performed?

A: Sanitary surveys are carried out to evaluate:

- The capability of a drinking water system to consistently and reliably deliver an adequate quality and quantity of safe drinking water to the consumer, and
- The system's compliance with states drinking water regulations.

(Source: 4B051 CDC)

2. What is the purpose of evaluating the system management and operation?

A:

- System security is inadequate.
- Failure to notify the state of MCL violations or ground water source fecal contamination.
- Failure to comply with enforcement actions and compliance agreements.

(Source: 4B051 CDC)

3. What are the similarities and differences between a Sanitary Survey and a WVA?

A:

Sanitary Survey vs. Water Vulnerability Assessment	
Similarities	Differences
<ul style="list-style-type: none"> • Seek to ensure safe drinking water is provided • Similar technical approach • Involves many of the same stakeholders and subject matter experts • Involves evaluation of common areas (system design, integrity, etc.) • Requires physical inspection of the entire system 	<ul style="list-style-type: none"> • The WVA incorporates assessment criteria specifically designed to safeguard the system from malicious acts, involves interactions with the base Antiterrorism Officer (ATO) and Force Protection Working Group • The WVA requires information to be documented in a format consistent with the AF Anti-Terrorism (AT)/Force Protection Program • The WVA report is, in most cases, a classified document • The sanitary survey involves a more in-depth review of the water system operations & maintenance and water monitoring programs, as well as recordkeeping and reporting, certifications, and other compliance-related requirements

(Source: 4B051 CDC)

4. A sanitary survey of a treatment facility should include what?

A:

- Analyze all the distinct parts of the treatment process.
- Review source water quality data that may impact the treatment process.
- Identify features that may pose a sanitary risk (e.g., cross connections in the plant).
- Review the criteria, procedures, and documentation used to comply with regulatory requirements.

(Source: 4B051 CDC)

STS Line Item 4.15.1.15: Perform water vulnerability assessments

TRAINER GUIDANCE

Proficiency Code:	3c
PC Definition:	Can do all parts of the task. Needs only a spot check of completed work. Can identify why and when the task must be done and why each step is needed.
Prerequisites:	None
Training References:	<ul style="list-style-type: none"> • <i>Water Vulnerability Assessment Technical Guide</i>, Oct 2010 • Air Force Instruction (AFI) 10-246, <i>Food and Water Protection Program</i>, May 2014
Additional Supporting References:	<ul style="list-style-type: none"> • AFI 48-144, <i>Drinking Water Surveillance Program</i> • State SWP implementing agency (http://www.epa.gov/safewater/sourcewater). • Local health department • ESOH Service Center WVA Checklist
CDC Reference:	4B051
Training Support Material:	ESOH Service Center, <i>Water</i>
Specific Techniques:	
Criterion Objective:	Given information on support organizations, stakeholders, facility, transportation, access to subject matter experts and an inventory of available water data, determine control options successfully completing all checklist items with NO trainer assistance.
Notes:	ESOH Service Center, Water, has tools and checklists for completing a WVA.

TASK STEPS

1. Plan approach.¹
2. Coordinate with stakeholders.²
3. Review key documents.³
4. Assess security/survivability programs.⁴
5. Assess physical assets and access points.⁴
6. Delineate observations.⁵
7. Analyze risk.⁶
8. Identify control options.⁷
9. Develop report.⁸

LOCAL REQUIREMENTS:

NOTES:

1. From the ESOH Service Center, Water, WVA Pre-Assessment Tool, using *Example WVA Activities Schedule* as a guideline, plan sequencing of assessment to ensure that no steps are omitted. Be sure to use the *WVA Update Protocol* from the same source which will provide each element of the assessment process. Remember, although checklists are available for the assessment processes, they are merely aids and cannot cover every detail that might need further investigation. Apply professional judgment to the processes as well.
2. The *WVA Stakeholders List* from the same source is especially helpful here. Every attempt should be made to identify and assess associated water systems owned or operated by entities that support the Air Force. Additionally, others who can be affected by the water being assessed should be part of the process. Questionnaire #1, *AT & Critical Infrastructure Program Review for Water*, and #2, *Off-Base Water Supplier*, under WVA Checklists can aid here.
3. The same ESOH source contains the *WVA Documents and Records Review List* which is a valuable tool for ensuring that relevant information is obtained for the assessment. The list also includes reviewing any previous BE water assessments. In addition to system maps or drawings referenced in Note 1, relevant documents can include potable water system-related technical studies (e.g., hydro-geologic survey, cross-connection survey) inspection/assessment reports [e.g., CAMP/ESOH CAMP (Water Quality Management), Sanitary Survey, Vulnerability Assessment], maintenance contracts and reports, monthly operations report (e.g., operating logs), CE recurring work program, source water permits, etc. Questionnaires 5-8 also include items to be looked at during a review of pertinent information. Data gathering will require interaction with a number of other agency personnel. These individuals should be “subject matter experts” and not simply agency “representatives.”
4. Use *Water Assets Inventory Worksheet* from ESOH Service Center, Water, WVA Pre-Assessment Tool. Obtain a map of the base and surrounding area which shows all water assets, connection points, and natural water features that may impact the water supply. Another checklist which is valuable at this point is Questionnaire #3, *Base Potable Water System*, which can be found at the same source under the WVA Checklists section. Under the Bioterrorism Act, the assessment should include (but not be limited to) such elements of a system as pipes and constructed conveyances; physical barriers; water collection, pretreatment, treatment, storage and distribution facilities; electronic, computer or other automated systems utilized by the water system; the use, storage, or handling of various chemicals; and the operation and maintenance of such system. Use Questionnaire # 4, *Review System Design Integrity*. Conduct an “eyes on” physical assessment of water assets and access points. The goal is to identify vulnerable assets and access points and assess whether control measures designed for their security and survivability adequately meet criteria. Major assets encompass, but are not limited to, primary and emergency assets such as:

- Ground water wells
- Surface water source intakes
- Cisterns or catch basins
- Transmission and distribution mains
- Transmission, distribution, and fire pumps
- Treatment units/facilities
- Tanks, bladders, and other bulk storage reservoirs
- Supplemental support systems (e.g., power and automated control and monitoring systems)
- Main isolation valves (particularly at major system interconnection points)
- Centrally-stored bottled water supplies

Additionally, specific access points of potential concern must be assessed. These access points commonly include, but are not limited to, the following:

- Exposed pipeline sections (e.g., aboveground, over-water crossings, and in meter/valve vaults)
- Standpipes, fire hydrants, and other major filling points
- Other main access points (e.g. backflow prevention devices, flushing and air release valves, and water main meters)
- Water trucks/tankers
- Water trailers/buffaloes, drums, lyster bags (a canvas water bag used for supplying military troops with chemically purified drinking water), and other tactical distribution containers
- Unit-level stored bottled water supplies

- Treatment chemical storage areas.
- Swimming pools

Questionnaires 9-17 can be used during the physical assessment of water assets and appurtenances and will aid in determining security and survivability of assets. The references cited above under “Additional Supporting References” can also add information to a physical assessment.

5. It is important that observation delineation began as soon as possible while memories are fresh. Identify deficiencies on a checklist which includes your observations. Refer to pages 41-46 in the *Water Vulnerability Assessment Technical Guide* for guidelines.
6. Risk analysis has three steps: (1) Estimate probability and severity of a worst-case water quality degradation and/or disruption incident; (2) Estimate the risk level; (3) Prioritize observations. Refer to pages 47-53 of the *Water Vulnerability Assessment Technical Guide* for further discussion. One of the reasons for the risk analysis is that the risk assessment allows commanders and risk managers to quantify and weigh the relative risk of competing vulnerabilities, so that they can determine the most effective allocation of limited resources to protect people and critical assets.
7. Identify specific corrective actions which are practical and have precedent.
8. The ultimate objective when developing the water vulnerability and risk assessment report is to furnish a product that best meets the needs of those who will utilize the information. To address AF-unique structuring, program responsibilities, and funding avenues—it is recommended that deficiencies be delineated and ranked by risk within three functional areas: Antiterrorism/Force Protection, Sanitary Survey, and Contingency Response. Based on previous experiences, a two-part report provides the best functional versatility at the installation level, particularly for the execution of corrective actions.

Part I is marked FOR OFFICIAL USE ONLY and contains the following three elements:

- (1) An executive summary ideally no longer than two pages
- (2) A main body that contains non-AT/FP Water Vulnerability Findings and support material for the following two potable water functional areas:
 - Sanitary Survey
 - Contingency Response
- (3) Applicable Appendices, e.g., References, Methodology, Photographs, Support Materials (e.g., relevant AWWA Standards), etc.

Part II contains the same report elements, but pertains only to Antiterrorism/Force Protection findings. This report, provided under separate cover, is classified SECRET.

This two-part report format provides a number of advantages:

- Non-AT/FP vulnerability findings can be routed, reviewed, and addressed without the restrictions associated with classified materials; this can be a special problem when risk managers and personnel responsible for “fixing” deficiencies do not have a qualified security clearance
- Classified materials are routed through, and reviewed by only those individuals with a legitimate “need to know”
- Risk managers are not burdened with sorting through vulnerability findings that do not pertain to their program area

The *Water Vulnerability Assessment Technical Guide*, pages 59-63, provides additional guidelines and suggestions for completing the report.

TRAINEE REVIEW QUESTIONS

STS Line Item 4.15.1.15: Perform water vulnerability assessments

1. Why is a water vulnerability assessment conducted?

2. Why are findings coordinated for input into the CVAMP?

3. Why and how should photos be taken of WVA observations?

PERFORMANCE CHECKLIST

STS Line Item 4.15.1.15: Perform water vulnerability assessments

Proficiency Code:	3c
PC Definition:	Can do all parts of the task. Needs only a spot check of completed work. Can identify why and when the task must be done and why each step is needed.

DID THE TRAINEE...		YES	NO
1. Plan approach?			
2. Coordinate with stakeholders?			
3. Review key documents?			
4. Assess security/survivability programs?			
5. Assess physical assets and access points?			
6. Delineate observations?			
7. Analyze risk?			
8. Identify control options?			
9. Develop report?			
Did the trainee successfully complete the task?			

 TRAINEE NAME (PRINT)

 TRAINER NAME (PRINT)

ANSWERS

1. Why is a water vulnerability assessment conducted?

A: Large quantities of water are required on a continuous basis to meet Air Force mission demands for drinking, firefighting, industrial operations, decontamination, personal hygiene, food preparation, sanitation, and other needs. To ensure these demands are met, water supplies must be adequately protected from physical disruption and contamination from all hazards posed by intentional threats, accidents, and natural disasters

AF water supplies are credible targets to inflict casualties and disrupt mission-essential operations – AFI 10-246

That in addition to terrorists and militant groups, threats are posed by insiders, criminals, vandals, or other disenfranchised individuals who have various motivations. Inherent water system design characteristics present numerous access points, increase interest in asymmetrical attack methods by operatives, and dependencies on non-Air Force water suppliers.

(Source: USAFSAM WVA Tech Guide)

2. Why are findings coordinated for input into the CVAMP?

A: To enable the Antiterrorism Working Group to effectively address mitigation of risks.

(Source: 4B051 CDC)

3. Why and how should photos be taken of WVA observations?

A: They can be useful to refer to when analyzing and processing WVA information. Avoid capturing information that can be used to identify the specific location of the asset or access point (facility numbers, street names, etc.). If the camera is equipped with a date stamp function, this function should be turned off. Be sure to gain permission in advance by the appropriate authority before taking photographs.

(Source: 4B051 CDC)

STS Line Item 4.15.1.16: Perform aircraft watering point survey (Bacteriological Analysis)

TRAINER GUIDANCE

Proficiency Code:	3c
PC Definition:	Can do all parts of the task. Needs only a spot check of completed work. Can identify why and when the task must be done and why each step is needed.
Prerequisites:	Complete QTP 4.15.3.11 before completing this training module. These prerequisite items need not be re-evaluated when completing this module.
Training References:	<ul style="list-style-type: none"> • Environmental Sampling, Analysis, and Monitoring (ESAM) Plan, if available • Manufacturer's instructions for test method (if using a commercial collection and analysis method such as Colilert®) • Standard Methods for the Examination of Water and Wastewater, 21st Ed, Parts 9060
Additional Supporting References:	<ul style="list-style-type: none"> • AFI 48–144, Safe Drinking Water Surveillance Program • USAFSAM Drinking Water Surveillance Technical Guide (April 2011)
CDC Reference:	4B051
Training Support Material:	<ul style="list-style-type: none"> • ESAM Plan • Sample container (properly prepared glass jar, presterilized plastic bottles, Whirlpak sterile plastic bags) • DPD kit, or equivalent
Specific Techniques:	Conduct hands-on training and evaluation. Training should be conducted in conjunction with 4.15.3.11.
Criterion Objective:	Given sampling supplies and references, collect a potable water sample for bacteriological analysis successfully completing all checklist items with limited trainer assistance.
Notes:	This training module focuses on sample collection only. Analyzing the sample is addressed in TM OEH 4.15.1.6, <i>Perform presence-absence method</i> . Collect sample using aseptic techniques to avoid contamination.

TASK STEPS

1. Gather sampling supplies.
2. Locate the sampling location.¹
3. Remove attachments from the cold water tap (i.e., diffuser screen, filters, etc.).
4. Open tap and let water run for 2-3 minutes, or for time sufficient to clear the service line.
5. Adjust flow so it does not splash.
6. Measure pH level of the water (see TM OEH 18-4).
7. Measure free available chlorine level (see TM OEH 18-5).
8. Remove bottle cap (*do not contaminate*).²
9. Fill container to 100 ml line and replace cap immediately.
10. Record sample collection data (i.e., collection point, date, time, FAC, and pH).
11. Label the sample.
12. Secure sample for transport.³
13. Utilize OEHMIS (DOEHRS or equivalent), as applicable.

LOCAL REQUIREMENTS:**NOTES:**

1. The ESAM Plan identifies all drinking water sampling sites. Do not sample from taps that allow water to flow over the outside of the tap. If tap cleanliness is questionable, choose another tap or apply a solution of sodium hypochlorite (100 mg NaOCl/L) to the inside and outside of the tap; let water run for additional 2-3 minutes after treatment.
2. Do not touch the inside of the collection container or cap. Do not rinse the collection container, as this will remove the de-chlorination agent.
3. Preferably hold samples at <50° F during transit to the laboratory. Analyze samples on the day of collection whenever possible and refrigerate overnight if analysis on the same day is not possible. Do not exceed 30 hours holding time from collection to analysis for coliform bacteria.

TRAINEE REVIEW QUESTIONS

**STS Line Item 4.15.1.16: Perform aircraft watering point survey
(Bacteriological Analysis)**

1. When should placard warnings be used for aircraft watering points, and what should be done in the situation?

2. What actions should be taken with civilian carrier's aircraft?

PERFORMANCE CHECKLIST

STS Line Item 4.15.1.16: Perform aircraft watering point survey (Bacteriological Analysis)

Proficiency Code:	3c
PC Definition:	Can do all parts of the task. Needs only a spot check of completed work. Can identify why and when the task must be done and why each step is needed.

DID THE TRAINEE...	YES	NO
1. Gather sampling supplies?		
2. Locate the sampling location?		
3. Remove attachments from tap?		
4. Open tap and let water run for 2-3 minutes, or for time sufficient to clear the service line?		
5. Adjust flow so it does not splash?		
6. Measure pH level of the water?		
7. Measure free available chlorine level?		
8. Remove bottle cap?		
9. Fill container to 100 ml line and replace cap immediately?		
10. Record field data (i.e., collection point, date, time, FAC, and pH) on appropriate form/log?		
11. Label the sample?		
12. Secure sample in an iced cooler for transport, if necessary?		
13. Utilize OEHMIS (DOEHRS or equivalent), if applicable?		
Did the trainee successfully complete the task?		

 TRAINEE NAME (PRINT)

 TRAINER NAME (PRINT)

ANSWERS

1. When should placard warnings be used for aircraft watering points, and what should be done in the situation?

A: If coliform bacteria are detected, the aircraft watering point must be placarded to ensure that contaminated water is not inadvertently put on an aircraft. An alternate approved source of water should be used until the contamination is eliminated. Note that samples from containers can be collected at BE discretion.

(Source: USAFSAM Drinking Water Surveillance Technical Guide (April 2011), Page 99, Section 9.4)

2. What actions should be taken with civilian carrier's aircraft?

A: Water samples should not be collected from civilian carrier aircraft,. If there is a suspected problem with the civilian carrier aircraft water system, the best approach would be to provide bottled water from an approved source until the carrier can conduct its own remediation actions in accordance with their approved O&M plan.

(Source: USAFSAM Drinking Water Surveillance Technical Guide (April 2011), Page 99, Section 9.4)