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DEPARTMENT OF DEFENSE HANDBOOK

GUIDELINES FOR CONDUCTING FOOD AND WATER RISK ASSESSMENTS (FWRA)

This handbook is for guidance only. Do not cite this document as a requirement.

AMSC N/A FSG 89GP

Use is limited to authorized personnel only; distribution is unlimited.

FOREWORD

1. This handbook is approved for use by authorized personnel in the Medical Departments and Agencies of the U.S. Army, Navy, and Air Force.

2. This is a new handbook, which covers the performance of food and water risk assessments on food establishments providing subsistence to the Department of Defense (DOD). The policies governing the procedures as authorization for the performance and reporting of food and water risk assessments can be found in Department of Defense Veterinary Service Activity (DODVSA) policy documents and AR 40-657/NAVSUPINST 4355.4H/MCO P1010.31G, "Veterinary/Medical Food Protection and Quality Assurance" (under revision).

3. This handbook has been developed to guide qualified personnel in the correct methods of assessing food establishments that are not formally audited by the U.S. Army Veterinary Service (VS) for inclusion in the *Worldwide Directory of Sanitarily Approved Food Establishments for Armed Forces Procurement*. This handbook contains guidelines for assessing the food protection risk in commercial food establishments, including manufacturing and direct-feeding facilities as well as those supporting military operations and exercises.

4. This handbook is used in conjunction with the requirements delineated in MIL-STD-3041, its appendices and supporting Government or non-Government publications. Other requirements that are not prescribed in the referenced documents do not apply.

5. The appendix is based on regulatory, industry and U.S. federal government requirements.

6. Comments, suggestions, or questions on this document should be addressed to the Director, DOD Veterinary Service Activity, Office of the Surgeon General/HQDA. Since contact information can change, verify the currency of this address information using the ASSIT Online database at https://assist.dla.mil.

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1. SCOPE

1.1 Scope. This handbook provides guidance related to the assessment of risk to U.S. Forces, from facilities being considered to provide food and water in support of military operations and exercises. This handbook is for guidance only and cannot be cited as a requirement.

a. The requirements for these assessments and related DOD policy are contained in MIL-STD-3041, DODVSA policy documents, and AR 40-657/NAVSUPINST 4355.4H/MCO P1010.31G (under revision). This handbook is based on the Current Good Manufacturing Practices (CGMP) requirements, as provided in Title 21, Code of Federal Regulations (CFR) Part 110 as the basic sanitation standards for food establishments. The CGMP requirements are based upon the Federal Food, Drug and Cosmetic Act of 1938, as amended.

b. This handbook is applicable to all establishments supplying subsistence purchased with appropriated or non-appropriated funds (NAF) for Department of Defense use, when listing in the *Worldwide Directory of Sanitarily Approved Food Establishments for Armed Forces Procurement* is not feasible. It also applies when DOD funds are used to purchase food for non-DOD consumption at DOD sponsored events. The food and water risk assessment program is intended for use in operations conducted outside the United States or its territories.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed below are not necessarily all of the documents referenced herein, but are those needed to understand the information provided by this handbook.

2.2 Government Documents. The following Government documents and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

2.2.1 Government Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein.

DEPARTMENT OF DEFENSE STANDARD

MIL-STD-3041, Requirements for Food and Water Risk Assessments

(Copies of this document are available online at http://quicksearch.dla.mil or http://assist.dla.mil or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094).

2.2.2 Other Government publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Federal Food, Drug and Cosmetic Act, 1938, as amended Public Law (PL) 107-188, Chapter IV.

(Copies of this document are available online at http://www.fda.gov under the Regulatory Information and Legislation links, or from the Superintendent of Public Documents, U. S. Government Printing Office, Washington, DC 20402-0001).

CODE OF FEDERAL REGULATIONS (CFR)

Code of Federal Regulations (CFR), Title 21, Part 110

(Application for copies of this document should be addressed to Superintendent of Public Documents, U. S. Government Printing Office, Washington, DC 20402-0001, or are available online at http://www.access.gpo.gov/nara/cfr/index.html/).

3. DEFINITIONS

3.1 General. The definitions and interpretations of terms found in 21 CFR 110 are applicable to this handbook.

3.2 Acceptable laboratory program. An acceptable laboratory program will include documented laboratory results; use of a laboratory within the establishment or submitting samples to a commercial laboratory; use of government or other accredited laboratories; use of proper standard methods and equipment; and any other objective evidence.

3.3 Adulterated. A food is deemed adulterated if it has been prepared, packed, or held under insanitary conditions whereby it may have been rendered injurious to health IAW the Federal Food, Drug and Cosmetic Act, 21 USC Chapter 9, Section 342.

3.4 Allergens. An allergen is a substance in the environment or a purified protein that can produce a hypersensitive reaction in the body. Food type allergens contain ingredients that are "known" allergens to include eggs, milk, fish, soybeans, peanuts, tree nuts, crustacea and wheat or any food that contains proteins derived from these foods.

3.5 Air Force Biomedical Specialist Public Health Officers. Active duty and Reserve component Air Force officers holding the 43HX specialty.

3.6 Army Environmental Science & Engineering Officer. Active duty and Reserve component Army officers holding the ESEO-72D67 or 72E67 specialties as defined in DA PAM 600-4; also referred to as Army Preventive Medicine (PM) officers.

3.7 Army Veterinary Corps Officer (VCO). Active duty and Reserve component Army officers (Doctor of Veterinary Medicine (DVM)/Veterinary Medicine Doctor (VMD)) and Warrant Officers (Veterinary Corps Food Safety Officer, military occupational specialty (MOS) 640A).

3.8 Bioterrorism. Bioterrorism is the use of biological agents, such as pathogenic organisms or agricultural pests, for terrorist purposes against a civilian or military population by a Government, organization, or individual.

3.9 Food and Water Risk Assessment (FWRA). A program conducted under specific circumstances by veterinary or public health personnel to assess food operations to identify and mitigate risk from intentional and unintentional contamination. Circumstances under which an assessment is conducted include short term deployments, for deployed forces during initial entry deployment, and exercises and other short-term operations conducted outside the United States or its territories.

3.10 Food defense**.** Protection measures necessary to identify and mitigate the threat of intentional contamination of food.

3.11 Food defense finding. Any condition, practice, step or procedure noted relating to the risk of intentional food contamination or increased food vulnerability. Food Defense findings can occur at any stage during receipt, storage, processing, packaging, packing, warehousing, distribution or serving.

3.12 Food defense plan. A written document or approach that uses established risk management procedures for preventing intentional food tampering and responding to threats or actual incidents of intentional tampering.

3.13 Food defense program. A program developed by an establishment to assess and mitigate the vulnerabilities within the food system or infrastructure, to an attack from deliberate or intentional acts of food destruction, contamination or tampering.

3.14 Food Protection Audit. An in-depth examination of an establishment's policy and procedures to determine effectiveness and compliance as it applies to the protection of food. Food protection audits examine and evaluate the adequacy of a commercial establishment's food safety, food defense, and other applicable control systems. Audits are performed by VCOs to determine initial or continued listing in the *Worldwide Directory of Sanitarily Approved Food Establishments for Armed Forces Procurement*.

3.15 Food safety. A food is deemed safe when it has been produced, packaged, distributed, received, stored, prepared and served under sanitary conditions whereby it has not been rendered injurious to health.

3.16 Food safety plan. A written or practiced non-regulatory plan similar to Hazardous Analysis and Critical Control Point (HACCP) that is implemented and practiced by establishment personnel and is designed to ensure the safe production of food. To differentiate mandatory (regulatory) HACCP from a voluntary program, this document makes reference to the food safety plan.

3.17 Laboratory testing: On-site. Presumptive laboratory testing conducted by the assessor during the FWRA mission using rapid testing methods.

3.18 Laboratory testing: Reference Laboratory. DOD fixed facility laboratories; these laboratories use standardized methods and reference materials, signature libraries, proficiency testing, and have rigorous quality assurance and quality control programs that meet the appropriate International Organization for Standardization (ISO) standard. They are accredited by U.S. government-recognized authorities, and provide confirmatory results.

3.19 Laboratory testing: Surveillance Laboratory. A laboratory designed to provide presumptive results on food and water samples. Normally they are operated, managed and maintained at the veterinary district or unit level.

3.20 Mitigation. An intervention or change in current food protection practices, procedures, or facilities that lowers the severity of initial risk.

3.21 Navy Environmental Health Officer. A Navy Medical Department Officer with Navy officer billet code (NOBC) 0861.

3.22 Objective evidence. Data confirming the status (presence or absence) of a condition, practice, step or procedure. Objective evidence may be obtained through observation, interviews, measurement, tests, record reviews, or other means.

3.23 Reputable source. Similar to certified suppliers, these sources have demonstrated a history of successful exportation of food to the United States and other countries. They often have independent inspections or audits of their facilities and have implemented good food protection and quality programs.

3.24 Risk. Possibility of loss or injury; a practice or procedure that creates or suggests a hazard; pertains to an adverse event or illness related to public health. Risk is the predicted impact of an identified hazard and depends on both severity and probability of the adverse event occurring.

3.25 Risk: extremely high. Level of health risk expected to result in very high rates of Disease and Non-Battle Injuries (DNBIs), severely degraded mission capabilities, or mission failure.

3.26 Risk: further elevated. Increased risk from a known or established existing level, due to additional identified foodborne illness health threats.

3.27 Risk: high. Level of risk expected to significantly degrade medical readiness, operational capabilities or mission assurance.

3.28 Risk: initial. Level of risk in a facility prior to applying risk mitigation strategies or practices.

3.29 Risk: low. Level of health risk expected to have little or no impact on medical readiness, operational capabilities or mission assurance.

3.30 Risk: moderate. Level of health risk expected to degrade medical readiness, operational capabilities or mission assurance, to a level not meeting low or high risk.

3.31 Risk: residual. Remaining level of health risk after a mitigation step has been employed.

3.32 U.S. Army Veterinary Service Application Portal. A collection of links to applications utilized by the U.S. Army Veterinary Service. Authorization is required for access.

3.33 Vulnerability. A weakness in the design, implementation or operation of an asset or system that can be exploited by an adversary or disrupted by a natural hazard.

3.34 Water potability certificate. Water potability certification: A certified laboratory report from a governmental agency or independent ISO 17025 accredited laboratory certifying water quality meets required water quality standards and is fit for human consumption.

3.35 Water, potable. Water that is fit for human consumption. The sanitation standard for general industry (29 CFR 1910.141(a)(2)) defines "Potable water" as water that meets the standards for drinking purposes of the State or local authority having jurisdiction, or water that meets the quality standards prescribed by the U.S. Environmental Protection Agency's National Primary Drinking Water Regulations (40 CFR 141).

4. GENERAL GUIDANCE

4.1 Food and Water Risk Assessments. FWRAs are designed to identify foodborne and waterborne hazards and facilitate the communication of associated health risks to U.S. Forces during missions where approved sources of food and water may not exist. The results of the FWRA are then provided to the Operational or Exercise Commander. FWRAs are performed on hotels, restaurants, caterers, Host Nation (HN) military dining facilities (DFACs) and other food facilities being evaluated as a source of food or water for U.S. Forces. If additional sources of food or water are needed, qualified veterinary service audit personnel may perform Food Protection Audits on nearby plants if authorized by their command. Although U.S. Forces have standard operating procedures to safeguard public health, the intent of a FWRA is to evaluate and communicate notable public health risks for troop feeding IAW DODD 6200.04, Force Health Protection, and DODI 6490.03, Deployment Health, so U.S. Forces can prioritize health risk mitigation efforts. The FWRA is an assessment, and does not "approve" or "disapprove" a specific area or facility.

4.2. "Rank order" of food establishments. Upon request of the Operational Commander, a comparison of multiple food facilities' results is made to estimate the safest eating place for personnel among those facilities assessed. There is no immediate follow-up process to ensure that risk mitigation recommendations were implemented. "Rank order" is a method to communicate to the Commander the assessor's estimate of the safest facilities based on their ability to procure, produce and serve wholesome food. When rank order of facilities is required, it is included in the cover memorandum.

4.3 Food Protection Audits vs. FWRAs. Food Protection Audits are performed by VCOs to determine initial or continued listing in the *Worldwide Directory of Sanitarily Approved Food Establishments for Armed Forces Procurement*. Commercial establishments requiring *Worldwide Directory* listing will be audited by VCOs in accordance with MIL-STD 3006. These audits are scored in relation to compliance and to determine acceptance for long-term or recurring DOD contracts. FWRAs are to identify the level of initial food protection risk, identify risk mitigation actions, and if fully implemented estimate residual health risk for a given food facility and feeding plan during short-term operations. FWRAs are not used in lieu of, substituted for, or performed to generate "approved sources". FWRAs leave the decision for utilizing assessed facilities with the Operational Commander based on the overall risk and mitigation capabilities.

4.4 FWRA duration of validity. FWRAs are valid for one-time, short-term or early entry use. Based on the mission, FWRAs are valid for 6 months (in some Commands) or until the end of the operation or event, whichever comes first.

4.5 Use of documents. MIL-STD-3041 is the only authorized document for use when conducting an FWRA. Product monographs are also available under the "tools" section at the FWRA ink in the U.S. Army Veterinary Service Application Portal (USAVSAP). These provide more in depth knowledge on various food items.

4.6 Risk based approach to food safety. A risk-based approach to food safety implies that food protection risk mitigation resources are directed towards problems that pose the largest threats to health and controls that can significantly reduce risk. The public health risk is evaluated for mission necessity IAW DODI 6490.03, Deployment Health. This risk is communicated to the Operational Commander. Establishments which have been previously approved and listed in the *Worldwide Directory of Sanitarily Approved Food Establishments for Armed Forces Procurement*, or successfully utilized under a previous FWRA, should be sought as a first choice. Establishments that have been previously disapproved (or received an extremely high risk rating) for unsanitary conditions require closer scrutiny. The assessor provides the necessary information to accurately determine the level of food and water risk. The Operational Commander decides whether to accept the presented health risk.

4.7 Risks associated with OCONUS procurement. There are inherent health risks associated with the purchase and consumption of subsistence procured in some overseas locations. These risks include, but are not limited to:

4.7.1 Poor sanitation. In many countries, food and waterborne diseases are endemic and exacerbated by poor hygienic and sanitation practices in restaurants and other commercial catering establishments. Sanitation risks can include: the lack of potable water and sanitizing supplies; improper sanitizing procedures; poor sanitary standards; questionable health standards among workers; poorly trained workforce; and manual or "hands-on" food processing techniques.

4.7.2 Risks unique to particular countries or regions. This can include the lack of food sanitation and hygiene laws and insufficient oversight by the local civilian government

(regulators); lack of a herd health monitoring program; lack of endemic and zoonotic disease controls; inadequate health care system; improper use of antibiotics, pesticides or other agents; non-progressive agriculture practices; and the lack of food chain accountability in the event of recalls or foodborne illness investigations.

4.7.3 Intentional contamination or adulteration. Vulnerabilities can include the absence of tamper-proof packaging and conveyance security; known terrorist threats or a local population hostile to U.S. Forces; and an inadequate food defense program at the assessed food feeding site. Food of OCONUS origin is generally considered to have a greater risk of being intentionally contaminated than CONUS produced food.

4.8 Assumptions used during the FWRA process.

4.8.1 Unapproved raw materials. Raw materials are from unapproved sources and the processes used to produce or process the raw materials have not been evaluated; hazards reasonably expected to be associated with the food will be present in higher levels than raw materials produced under stringent food safety systems. Raw materials (such as fresh fruits and vegetables, foods of animal origin, water, etc) from unapproved sources are more likely to contain hazards that cannot be controlled by cooking (such as pesticides, radiological residues, chemical hazards and heavy metals). While these hazards do not always have an immediate health impact, they may have delayed or chronic health effects.

4.8.2 Animal origin food. Foods of animal origin are a potential source of cross-contamination when the activities within the food processing area are not well-controlled.

4.8.3 Exposure. When estimating the percent of personnel exposed to a food item assume the main entrée, primary components of the meal and dessert will be consumed by > 90% of personnel since there is typically a limited number of primary components offered at each meal (for example, if chicken is served for lunch, assume personnel do not have the option to eat beef or fish instead of chicken as the main entrée). Secondary items (for example, raw sprouts, soup, and salad items) will be consumed by < 20% of personnel.

4.8.4 Consumption rate. As a function of the risk characterization process, items that are historically very hazardous may not have the highest impact on personnel and mission capability because they will likely be consumed by a low percentage of personnel.

4.9 Control measures. Control measures (menu limitations, requirements for product storage and handling, preparation, etc.) used to mitigate initial risks are implemented in a systematic manner with monitoring and records to ensure the estimated residual risk level is achieved.

5. DETAILED GUIDANCE

5.1 General. Procedures for conducting FWRAs.

5.1.1 Step 1, receive mission tasking or OPORD. The tasking organization will provide all information received from the requesting organization in the tasking or OPORD and will ensure that the information provided in the Mission Request Worksheet (on figure 1) received from the requesting organization is complete, sufficient, and accurate

5.1.2 Step 2, generate mission tasking or OPORD. Gather as much additional information as possible prior to the mission using the Pre-Mission Support Worksheet (on figure 2). The worksheet outlines required information and actions needed to assist in preparing for the assessment. Depending on the COCOM capabilities, an automated tasking is generated in the USAVSAP, FWRA application, to the assessors.

5.1.3 Step 3, pre-assessment. The assessor, upon receipt of the mission tasking from the tasking organization, will complete the subsequent steps in order. The assessor will gather as much additional information as possible prior to the mission using the Pre-Mission Support Worksheet. The worksheet outlines required information and actions needed to assist in preparing for the assessment.

a. Determine and establish point of contacts (POCs): Normally provided by the Tasking or OPORD. Establishing POCs can be the most challenging and frustrating part of planning the FWRA so start this process as early as possible. The tasking may provide only one POC, and this may not always be correct. Achieving contact with key players will make it easier for the assessor to begin collecting data about the type of feeding plan including menus that will be used. Document all POCs using the checklist.

b. Mission intelligence preparation: Utilize the resources outlined on the Pre-Mission Support Worksheet to gather the military intelligence and threat in the area of operation. If possible, conduct interviews with government public health officials to gather common (endemic) food and waterborne disease statistical data in the country. For exercises and field feeding operations, the assessor provides exercise contractors a list of approved food sources in the area of operations to minimize the number of FWRAs conducted. If possible, the assessor coordinates with the exercise food planner, contractors, and medical planners to craft a feasible feeding plan that presents the lowest risk of foodborne illness.

c. Establish coordination with requesting unit: Coordinate with mission planners and contracting personnel to establish initial and final planning conference dates to determine when FWRAs are to be performed. Document these dates on the Pre-Mission Support Worksheet. The date of the initial visit in support of the exercise should be well in advance of the actual exercise if possible.

d. References: Obtain applicable references, equipment, lab sampling supplies and any other assets needed. Follow the worksheet to insure that all areas have been addressed.

5.1.4 Step 4, conduct Food and Water Risk Assessment.

a. Assess all caterers, restaurants, dining facilities (DFACs) and food preparation facilities involved in the feeding plan. Verify areas on step 1 of the checklist during each FWRA visit.

b. Complete the “Food & Water Risk Assessment Checklist" for each establishment (on figure A-3). Maintain comprehensive notes of everything you observe (such as, times, temperatures, raw ingredients, sanitizer concentrations, etc.) and assessed (temperatures, sanitizer checks, rapid method lab tests, etc). Focus on critical food safety and defense measures.

c. After the site visit, complete the checklist. Determine the initial foodborne illness risk level, by assessing each checklist item in conjunction with the initial risk estimate chart within the checklist.

d. Table I contains common food group mitigations. This table is used as a guide for assessors to help them determine proper risk mitigations to recommend during the FWRA process.

e. Recommendations/control measures – determine and generate recommendations that will effectively reduce microbiological, chemical, and physical hazards resulting in a reduction of the initial risk. Use recommended control measures outlined in the applicable monographs for each food item at the point of consumption, to help mitigate or eliminate the risk within the establishment. These monographs are available in multiple sites (Department of Veterinary Science, AMEDD Center & School Pre-deployment DVD; VSAP Document Library).

f. Determine residual foodborne illness risk level. Recommendations and control measures to the initial risk are to provide both the facility and the applicable Operational Commander or representative the steps that can be employed to lower the initial risk level to a lower residual risk. Ratings are applied to both the initial and residual health risk levels. The residual risk is based on the assessor’s confidence level that recommended mitigations will be implemented. Do not assume significant risk mitigations will be implemented without some method of verification. Immediate corrective actions made during the FWRA and objective evidence presented prior to the FWRA report being finalized can be considered when determining final residual risk.

g. Certain food items may be scored as "product exclusions". This is done when the risk of using that item is extremely high; and there is no confidence mitigation measures will be implemented or work.

h. Laboratory sampling may include on-site microbiological presumptive screening (rapid method) or DOD lab confirmatory testing. Collecting samples for laboratory testing includes prior coordination (whenever possible) and use of the appropriate laboratory sampling forms, containers and protocol per the laboratory’s sample submission guidelines or direct guidance.

i. Facility source (tap) water and all brands of non-carbonated bottled and ice are the only items that require laboratory testing. Testing is performed under the guidance of the water and

ice laboratory sampling decision matrix (on figure A-1). Deviations from the matrix should only be made due to extremely significant adverse public health occurrences (i.e., floods, earthquakes or other disasters).

j. For ice products, collect both the water used to produce ice (if possible) and the final ice product (same quantities as for bottled water). When collecting the final ice product, the melted quantity should equal the bottled water sample needs, and can be estimated by anticipating that it will melt to half the volume of the original ice product.

k. Collect non-carbonated bottled and source (tap) water samples for on-site microbiological presumptive testing. This screening is for water potability.

l. Conduct *on-site* screening tests for immediate inclusion in the risk assessment. This includes sanitizer test strips, thermometers, and rapid method water test kits. Operational or Exercise Commanders or representatives may choose to use or eliminate food operations before definitive DOD laboratory results are received. In this case, the assessor communicates that on-site testing is presumptive.

5.1.5 FWRA report – scoring findings. Findings are scored in relation to the potential severity of a hazard and the probable frequency that this hazard will occur. Findings will be scored as: Extremely High; High; Moderate; or Low. Ratings are applied to both the initial risk as well as residual risk levels. A rating is given to each item; significant risk will be assigned if appropriate, through the scoring of "high" or "extremely high". A written mitigation to the initial risk will be provided. The mitigation is provided to tell both the facility and the applicable representative what steps can be employed to reduce the initial health risk level to a lower residual health risk. For assessments involving military exercises, a DA FORM 7566, Composite Risk Management (CRM) Worksheet is provided to the Commander or designated representative by the assessor (on figure A-2). The completed report consists of the DA Form 7566; FWRA checklist; cover memorandum; and after-action report (AAR). See Appendix A, on figures A-2 through A-5.

5.1.6 Step 5, brief the Operational Commander or designated representative.

a. Brief the Commander or designated representative. Ideally, the briefing is given directly to the Operational Commander or representative and clearly conveys the initial health risk level, mitigation recommendations, and residual foodborne illness health risk assessment information.

b. Complete the FWRA checklist (on figure A-3).

c. Complete the cover memorandum for the supported organization, using the template in Appendix A as a guide (on figure A-4). Each Command is authorized to tailor and modify the example template for their specific geographical area.

d. Complete the After-Action Report (AAR). Complete the AAR (on figure A-5) in accordance with local Command policy.

(1) The assessor distributes the completed FWRA report to the Operational Commander IAW the OPORD or mission tasker. Additionally, all FWRA reports should be submitted to the theater-level public health asset (i.e., Surgeon of the Geographic Combatant Command) to archive for future use.

(2) All assessors regardless of Service or Branch post a copy of the FWRA checklist and any laboratory results to the USAVSAP, FWRA application for FWRA reports. Copies of the AAR are sent to the Military Environmental Surveillance Library (MESL).

5.2 Communicating food protection risks.

5.2.1 Communicating health risk to the Operational Commander. When communicating health risk to Commanders, it is imperative to recognize that categorizing a hazard as a high risk has implications. Commanders familiar with Army composite risk management and combat situations will infer that if the hazardous event occurs, serious consequences will follow. For the Commander to accept this risk, the decision to continue is weighed carefully against the potential gain. Those tasked with performing FWRAs should therefore be familiar with the definitions put forth in FM 5-19 in order to effectively and meaningfully communicate risk to customers. An obvious advantage to utilizing the composite risk management process is that it enables us to communicate risk in a standardized and defined manner across various disciplines and Services.

5.2.2 Using a health risk communication program. Using a health risk communication program can aid in building and maintaining rapport, establishing trust and credibility, and in exchanging technical, scientific, or medical information.

6. NOTES

6.1 Intended use. This handbook is intended to be used as guidance for assessing the foodborne illness threat associated with commercial eating establishments or food producers for exercises, operations, meetings or conferences, primarily in OCONUS locations.

6.2 Subject term (keyword) listing. The following terms may be used to identify this handbook during retrieval searches:

Deployed
Exercises
Laboratory
Mitigate
Operations

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TABLE I. **Common food group mitigations**

Product	**Receipt/storage/serve**	**Cook and Serve**
Fresh beef, veal, lamb pork, veal, lamb, sheep, rabbit, etc.)	Receipt 41F/5C or below; Storage 41F/5C or below; Thaw using proper technique at 41F/5C until fully thawed	Internal cook to 145F/63C Maintain at 135F/57C or above while serving
Ground meat & meat mixtures (except poultry)	Receipt 41F/5C or below; Storage 41F/5C or below; Thaw using proper technique at 41F/5C until fully thawed	Internal cook to 160F/71C; Maintain at 135F/57C or above while serving
Pork and ham	Receipt 41F/5C or below; Storage 41F/5C or below; Thaw using proper technique at 41F/5C until fully thawed	Fresh pork and fresh ham (raw) internal cook to 145F/63C; Precooked ham (reheat) to 140F/60C Maintain at 135F/57C or above while serving
Poultry, duck, goose, whole or ground	Receipt 41F/5C or below; Storage 41F/5C or below; Thaw using proper technique at 41F/5C until fully thawed	Internal cook to 165F/74C for 15 seconds; Maintain at 135F/57C or above while serving
Fin Fish	Receipt 38F/3C or below; Storage 38F/3C or below	No raw or rare fish consumption (sushi type items); internal cook to 145F/63C, or cook until flesh is opaque and separates easily with a fork; maintain at 135F/57C or above while serving
Shrimp, lobster and clams	Receipt 38F/3C or below; Storage 38F/3C or below	Cook until flesh is pearly and opaque; Maintain at 135F/57C or above while serving
Clams, Oysters, and Mussels	Receipt 38F/3C or below; Storage 38F/3C or below	Cook until shells open during cooking; Maintain at 135F/57C or above while serving
Scallops	Receipt 38F/3C or below; Storage 38F/3C or below	Cook until flesh is milky white or opaque and firm; Maintain at 135F/57C or above while serving
Fluid dairy (milk, creams, etc.)	Ultra-High Temperature (UHT) product (shelf stable) preferred; verify pasteurization on packaging; Refrigerate after opening 41F/5C or below; maintain at 41F/5C or below while serving	
Eggs	Receipt 45F/7C or below; Storage 41F/5C or below	Cook to 145F/63F; no runny eggs Maintain at 135F/57C or above while serving

TABLE I. **Common food group mitigations – Continued**

Fresh fruits & vegetables (processed or whole)	Receipt from reputable supplier; verify physical condition is sound (no bruising, damage to flesh); Wash under running water (may use mild detergent); Disinfect in chlorinated water immersion at 50-200 ppm for 1 minute (test strips for ppm verification); rinse
Bottled water and ice	Possess laboratory analysis for bottled water and ice (potability status)
Juices	Ultra-High Temperature (UHT) product (shelf stable) preferred; Verify pasteurization on packaging; frozen concentrate if no UHT possible; Refrigerate after opening and mixing, 41F/5C or below; Maintain at 41F/5C or below while serving
Bakery (breads, buns, rolls, biscuits, pastries, donuts)	No meat or real dairy filled items
Ready to eat luncheon style meats	Avoid if possible; Receipt temperature of 41F/5C or below; Storage temperature of 41F/5C or below; Maintain at 41F/5C or below while serving

Mission Request Worksheet

I. General information: Ensure this information is provided by the requesting organization.

Mission name:

Unit(s) involved:

Date of mission:

Duration of mission:

Location(s) of mission (Include all feeding sites):

Number of personnel supported at each site:

Description of feeding plan (MRE, UGR, Prime Vendor, local vendor or caterer, caterer delivery, hotel restaurant, foods purchased from food establishments and prepared at a dining facility or mobile kitchen trailer). Describe primary and alternate feeding plans as appropriate.

II. Provide all points of contact (POC's) information (phone numbers and email addresses).

Facility POCs (caterer, hotel, etc.):

Contracting Officer for the mission:

Operational or Exercise Commander POC for Temporary Duty (TDY or TAD) orders and fund site:

G-2 General security acceptance of risk brief (if required):

G-3 or exercise coordinator:

G-4 (logistics chain, supply system):

Unit Surgeon or Medical Officer:

Embassy/MILGRP POC:

Defense Attaché (DAO)/Bilateral Affairs Officer in the country's embassy (Ministry of Defense): If authorized by Operational Commander

MIL TO MIL coordinator in the country's embassy (if authorized):

FIGURE 1. **Mission Request Worksheet**

Pre-Mission Support Worksheet

I. Items researched during the pre-deployment phase:

A. Review country/location public health situation:

1. What zoonotic, food, and waterborne infectious diseases are endemic to this area?

a. Monitoring emerging diseases. *ProMED-mail*, http://www.promedmail.org/

b. Local public health capabilities (request through military planners).

c. AAR review for previous missions to this area - main issues.

d. Water quality and treatment standards, and complete water infrastructure.

e. Agricultural processes and practices (waste disposal and animal husbandry).

f. Civilian medical support/public health system.

g. Industry in the area of operations (AO) that may be a source of hazardous chemical soil or water contamination.

2. Review current U.S. approved food source capabilities (as well as recent FWRAs performed) in the AO:

a. Provide a list of sanitarily approved food and water sources for the AO.

1) Types of food.

2) Other agencies such as USDA, USDC, FDA.

3) Results of audits (performed by military or commercial entity).

b. Potable water and ice (is water treatment organic to the unit?).

1) Sufficient production and distribution units.

2) Sufficient availability and quantity.

c. Food and water testing (sampling protocols, forms, submission guide).

1) Immediate capabilities for on-site testing (rapid methods, test strips and swabs).

FIGURE 2. **Pre-mission support worksheet**

2) Expedient surveillance laboratory location and capabilities (prior arrangements).

3) Reference laboratory location and requirements (prior arrangements).

d. Review characteristics of the AO:

1) Is there any confirmed chemical, biological, radiological or pesticide soil/water contamination in the AO?

2) Will the season affect local water supply or other food (fresh fruits and vegetables)?

3) Will the season affect pest management operations?

II. Items confirmed or accomplished during the pre-deployment phase:

A. Coordinate and establish FWRA and audit date(s):

1. Obtain current threat assessment and identify theater escort.

2. Pre-site survey dates:

3. Commercial Food Protection Audit(s):

4. FWRA visit(s):

5. Local market visit(s):

6. Local public health interviews:

B. Logistics and administration:

1. Lab backpack.

2. Travel orders and funding.

3. Country and theater clearances.

4. Training requirements.

5. Medical requirements – immunizations.

FIGURE 2. **Pre-mission support worksheet – Continued**

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COMPLETING THE FOOD AND WATER RISK ASSESSMENT CHECKLIST

A.1 Scope.

A.1.1 Scope. This appendix provides information on the procedure for completing the food and water risk assessment checklist.

A.2 Procedure.

A.2.1 Completing the checklist. A brief explanation of the checklist with the key points to consider when assessing each item is provided. These may not be all inclusive. Note that the top portion of the checklist (above Step I) is completed after all other parts of the checklist have been completed, and both initial and residual risk levels have been determined, to include food items that are excluded. Risk elevation guidance is provided after each item description to aid the assessor in determining the appropriate level of risk.

A.2.2 Section B, buildings.

A.2.2.1 Item B1 - physical facility design. Food production buildings, structures, or areas are of such size, construction, and design to facilitate maintenance and sanitary operations for food processing and preparation purposes. The facilities:

a. Reduce the risk of contamination to food, food-contact surfaces, or food-packaging materials with microorganisms, chemicals, filth, or other extraneous material. Contamination is reduced through effective design, including the separation of operations in which contamination is likely to occur, by one or more of the following means: location, time, partition, air flow, enclosed systems, or other effective means.

b. Are constructed in such a manner and with the appropriate materials that floors, walls, and ceilings can be cleaned, and kept clean and in good repair. Drip or condensate from fixtures, ducts and pipes do not contaminate food, food-contact surfaces, or food-packaging materials. Aisles or working spaces are provided between equipment and walls for pest management concerns, are unobstructed, and of such width to permit employees to perform their duties. Storage areas are large enough in size to reduce the likelihood of contamination.

c. Toilet facilities are on premises, are constructed in number to service the personnel assigned, and do not open directly into food processing areas. Supplies of running water, soap, and effective hand drying methods are available. Portable toilets on premises are maintained and serviced regularly.

The risk is elevated if the design and use of the facility allows for contamination of food products; it is elevated when the construction and food contact surfaces increase the likelihood for contamination; it is also elevated if toilet facilities are not present or maintained properly.

A.2.2.2 Item B2 - grounds and facilities maintenance. The grounds around the facility are kept in a condition that will protect against the contamination of food. The methods for maintenance of grounds and facilities include, but are not limited to:

a. Properly storing equipment, and landscape maintenance within the immediate vicinity of the building or structures that does not result in an attractant, breeding place, or harborage for pests.

b. Properly draining areas that may contribute contamination to food by seepage, foot-borne filth, or providing a breeding place for pests.

c. Pest control utilized to ensure that all forms of pests are addressed and controlled. The use of pest control and monitoring equipment is in accordance with manufacturers' guidance and does not interfere with food safety and security procedures. The assessor surveys the facility and determines if a current pest problem exists. The methods utilized are appropriate for the types of pests present.

The risk is elevated when equipment is stored outside the facility, proper landscaping is not maintained, excessive trash and clutter is present outside the facility, or proper drainage of the facility grounds is not maintained. The risk is further elevated if the pest control monitoring equipment is missing or not used properly, or if signs of a pest infestation exist.

A.2.2.3 Item B3 - waste disposal. Systems for waste holding and disposal are operated in a manner that does not constitute a source of contamination in areas where food is exposed. All litter and waste is removed on a regular basis. Rubbish and any offal is so conveyed, stored, and disposed of as to minimize the development of odor, minimize the potential for the waste becoming an attractant and harborage or breeding place for pests, and protect against contamination of food, food-contact surfaces, water supplies, and ground surfaces.

The risk is elevated if the food waste and trash are not disposed of properly. The risk is further elevated if waste holding processes are not sufficient to protect food or food processing areas.

A.2.2.4 Item B4 - delivery vehicles. Food transported by vehicles is protected against contamination as necessary. Vehicles are equipped with refrigeration units that are capable of maintaining chill or frozen temperatures as needed. Floors, walls and ceilings are clean and in good repair, with no holes visible. Separation between different temperature zones is included on all applicable mixed-load vehicles. Pallets or ribbing on the floors of vehicles is used to facilitate temperature flow and circulation.

The risk is elevated if the delivery vehicles are not in good condition or not easily cleanable. Risk is further elevated if vehicles cannot maintain correct temperatures.

A.2.2.5 Item B5 - storage area design. Food storage buildings, structures, or areas are of such size, construction, and design to facilitate maintenance and sanitary operations.

a. All floors have a smooth finish. Floor surfaces are durable, sealed and easily cleaned in all areas in which food is stored. Walls have nonabsorbent washing surfaces, and the use of galvanized material in coolers or freezers is avoided.

b. Refrigeration units are of such size and design to cool or freeze food items. Walls, floors and ceilings of cooling units are in good repair and properly insulated. There are no air gaps visible underneath storage unit doors.

The risk is elevated when storage areas are not designed to be easily cleaned, sanitized and maintained. Risk is further elevated when storage areas are not equipped to maintain food products at proper temperatures.

A.2.2.6 Item B6 - temperature measuring devices. Each freezer and cold storage compartment used to store and hold food capable of supporting growth of microorganisms has a properly functioning thermometer, temperature-measuring device, or temperature-recording device. The sensor of a temperature measuring device is located to measure the air temperature in the warmest part of a mechanically refrigerated unit and in the coolest part of a hot food storage unit. They are not broken, rusty or otherwise damaged, and have dials large enough to read, with the numbers still legible. Thermometers are calibrated, maintained, and logged, and are furnished for all cooking operations.

The risk is elevated if temperature measuring devices are absent, not maintained, or improperly used or located. The risk is also elevated if temperature measuring devices are not calibrated.

A.2.2.7 Item B7 - lighting. Sufficient lighting is provided in all areas where food is examined, processed, or stored and where equipment or utensils are cleaned. The facility uses safety-type light bulbs, fixtures, or other equipment suspended over exposed food in any step of preparation or otherwise, to protect against food contamination caused by glass breakage.

The risk is elevated when lighting is insufficient to safely examine, process, or store food. It is further elevated when protection against glass breakage is not provided.

A.2.2.8 Item B8 - hand washing facilities. Hand-washing facilities are convenient and are furnished with running water. This is accomplished by providing:

a. Hand-washing facilities at each location in the food preparation area where good sanitary practices require employees to wash and sanitize their hands.

b. Effective hand-cleaning supplies.

c. Single service paper, sanitary towel service, or other drying devices.

d. For field conditions during exercises and operations, a means of washing hands is provided.

e. For field feeding exercises and operations requiring on-site preparation of food by catering employees, contract provisions are reviewed to ensure inclusion of appropriate hand washing equipment requirements.

The risk is elevated when hand washing stations are not provided, or stocked with the necessary materials. The risk is also elevated if catered field feeding operations do not include proper hand washing measures.

A.2.3 Section P, personnel.

A.2.3.1 Item P1 - medical screening. Indigenous contagious diseases are identified during completion of the pre-mission support worksheet. The employer's health program includes medical screenings for known disease risks in the FWRA area; look for screening of these diseases via blood tests, stool samples, chest x-rays, and physical exams. Employees that appear sick, having open lesions, etc., are excluded from food operations. Under these type programs, employees are instructed to report such health conditions to their supervisors.

The risk is elevated when only initial medical screenings are conducted with no follow-up annual medical screening, or when critical components of the screening are not conducted. The risk is further elevated if there are no medical screenings conducted or if health programs don't exclude sick appearing employees; or if employees are unaware of reporting procedures.

A.2.3.2 Item P2 - training. Assessors evaluate the effectiveness of food safety and sanitation training. Assessor verifies (thru interviews, observation, and record review) food handler's and supervisor's training in proper food handling techniques, food sources, inadequate cooking, improper holding temperatures, cross contamination, personal hygiene, and food-protection principles. Training can be formal classroom, group, individual, or on-the-job. Assessor assigns risk based on employee's demonstrated knowledge (time and temperature relationships, PHFs, etc.) of food safety and sanitation, and documentation provided.

The risk is elevated when the training program is insufficient or undocumented. The risk is further elevated when employees are unaware of good food safety practices.

A.2.3.3 Item P3 - jewelry or loose objects. Employees that work in food processing and preparation areas are required to remove all unsecured jewelry and other objects (pens, thermometers, notepads, etc.) that might fall into food, equipment, or containers. Hand jewelry that cannot be properly sanitized is also removed. If such hand jewelry cannot be removed, it is covered by material which can be maintained in an intact, clean, and sanitary condition and which effectively protects against the contamination by these objects of the food, food-contact surfaces, or food-packaging materials.

The risk is elevated when the wearing of unsecured jewelry is a systemic problem. The risk is further elevated if hand jewelry is observed uncovered while in contact with food, food-contact surfaces or food-packaging materials or if jewelry or other objects are unsecured to the point of posing an immediate physical hazard to food items.

A.2.3.4 Item P4 - hand washing and gloves. Assessor evaluates hand-washing practices and procedures within the food operation. Employees wash hands thoroughly before starting work, after each absence from the work station, and at any other time when the hands may have become soiled or contaminated. Only clean, impermeable, intact, sanitary gloves are used in food handling and are changed when needed (heavily soiled, torn, etc.).

The risk is elevated when improper hand-washing practices are observed; or when gloves are not available, not the correct type, or not changed as needed.

A.2.4 Section R, raw materials.

A.2.4.1 Item R1 - wholesome. Raw materials are effectively treated (pasteurized, cooked, etc.) during processing, to reduce harmful microorganism levels. This treatment is designed to eliminate pathogens resulting in endemic diseases that have been pre-determined during the pre-assessment phase. Raw materials are washed or cleaned as necessary to remove soil or other contamination. Assessor will assign risk based on walk-thru observations; documentation (laboratory testing) provided by the food operation; and water and ice test results from on-site, surveillance, or DOD laboratory testing.

The risk is elevated when raw materials are not effectively washed, cleaned, or treated; it is also elevated when there are non-conforming lab results from: the establishment (with no associated corrective actions); an independent laboratory; or a DOD Laboratory. This risk is further elevated if the raw materials are potentially hazardous foods.

A.2.4.2 Item R2 - approved sources. The use of sanitarily approved food sources (IAW AR 40-657) significantly lowers the risk of foodborne illness. When non-approved food sources are used, using quality raw materials (from a major supplier or reputable source) also lowers the risk of foodborne illness. Examples of reputable sources include facilities: that are also inspected by local government agencies; have third party auditors; belong to private trade organizations; have a history of successful exportation to the United States; etc.

The risk is elevated when approved sources or major suppliers are not used; or if non-reputable food suppliers are used. It is also elevated if the establishment is not inspected by any other agency and has no history of exports to the United States.

A.2.4.3 Item R3 - receipt inspection. Containers and carriers of raw materials are inspected on receipt to ensure that their condition has not contributed to the contamination or deterioration of food. Personnel receiving food items inspect food for wholesomeness, condition, deterioration, and other non-conformances.

The risk is elevated if there is a poor receipt inspection program; it is further elevated if there is no receipt inspection process in their system.

A.2.4.4 Item R4 - food handling. Receipt, processing, and storage of food are conducted under conditions and controls necessary to minimize microbial growth or contamination. Covered containers, clean attire, gloves, and clean utensils all contribute to proper handling.

Liquid or dry raw materials received and stored are protected against contamination. Equipment, containers, and utensils used to convey, hold, or store raw materials should be constructed and maintained to protect against contamination. Assessor assigns risk based on observed and documented handling procedures.

The risk is elevated if raw materials are not properly stored or handled at all times to protect them from contamination and may be further elevated for potentially hazardous foods.

A.2.4.5 Item R5 - laboratory testing program. The assessor evaluates the internal laboratory testing program (equipment, supplies, location, protocols and personnel) and test results. If external laboratories are used, the results and credentials from the laboratory are assessed. When appropriate, the assessor will leverage DOD testing capabilities (results from on-site testing, surveillance laboratory testing, and DOD Laboratory testing). Assessor assigns risk based on confidence, compliance, corrective actions, and results of laboratory testing.

The risk is elevated if the assessor finds unacceptable equipment, supplies, or personnel within the laboratory program, or if the program (internal or external) is non-existent. It is further elevated if corrective actions are not documented on nonconforming results.

A.2.4.6 Item R6 - potable water. The water supply is sufficient for the operations intended and is derived from a safe source. When evaluating the source, consideration is given to area infrastructure and conveyance on a continuing basis. This includes an assessment of the surrounding geographical area for farms, buildings, businesses, terrain, and other pertinent factors that would contaminate or otherwise adversely affect the water supply. Any water that contacts food or food-contact surfaces is of safe sanitary quality. The assessor evaluates water potability documentation, obtains laboratory samples, and performs or initiates laboratory testing (on-site, surveillance laboratory, and DOD Laboratory). Whenever possible, the food operation is not used until laboratory test results are obtained.

The risk is elevated if the surrounding infrastructure cannot supply safe water to the establishment. Risk is further elevated if the assessor finds unreliable lab results or there are no laboratory results.

A.2.4.7 Item R7 - potable ice. When ice is used in contact with food or consumed in drinks, it is made from water that is safe. The assessor evaluates water potability documentation, obtains laboratory samples, and performs or initiates laboratory testing (on-site, surveillance laboratory, and DOD Laboratory). Whenever possible, use ice only after acceptable laboratory results are obtained. Decisions for laboratory sampling of ice and water are on FIGURE A-1.

The risk is elevated if the surrounding infrastructure cannot supply safe water for the facility ice supply. Risk is further elevated if the assessor finds unreliable lab results; there are no laboratory results; or the assessor does not have the capability to send samples to a DOD Laboratory.

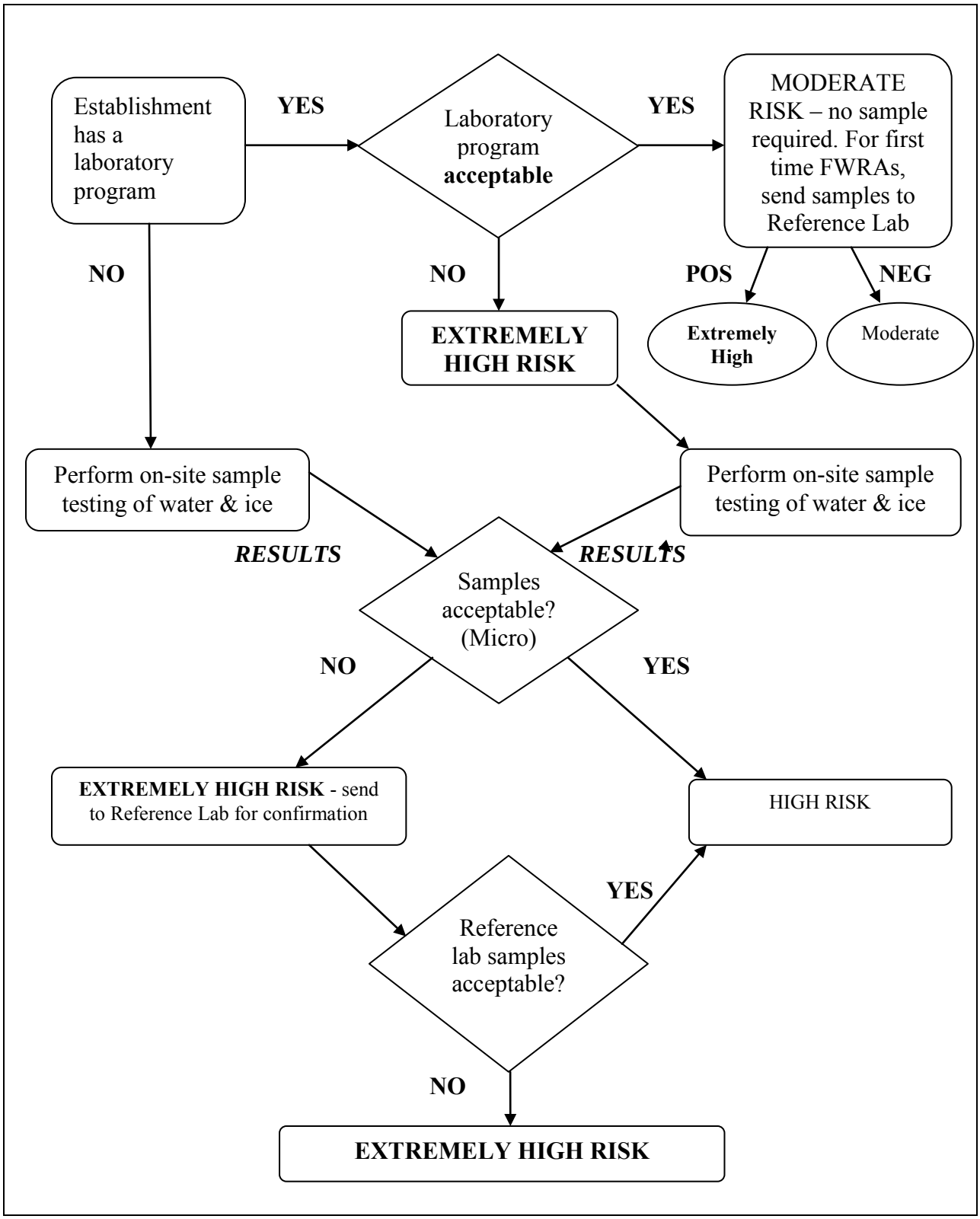


FIGURE A-1. **Water and ice laboratory sampling decision matrix**

The risk is extremely high when there is no record of laboratory testing, and all subsequent laboratory samples are found nonconforming. Risk is also extremely high when test results from the establishment or local surveillance testing indicate the presence of indicator organisms or pathogens. Acceptable microbiological test results for water & ice in facilities which do not have an acceptable, auditable laboratory program will always be rated not less than a high risk. For facilities with an acceptable laboratory program the risk is moderate; for facilities with an acceptable laboratory program receiving their first FWRA, the risk is extremely high when sample results are unacceptable (positive) and moderate when results are acceptable (negative).

A.2.4.8 Item R8 - limitation of use. Assessors evaluate risk posed by ice in the food operation. Ice used to cool the exteriors of other food containers cannot be: re-used as an ingredient in other items such as drinks; mixed into other recipe items; used in salad bars if in contact with food; or be used in other similar ways.

The risk is elevated if ice is being re-used in this manner.

A.2.4.9 Item R9 - excluding physical contaminants. The assessor evaluates the threat of physical contaminants entering food product. Food preparation and processing, cooking, transporting within processing areas and kitchens, assembling, and other operations are performed in such a way that the food is protected against contamination. Facilities can employ any effective sanitary means to accomplish this. The goal is to provide physical protection from contamination, particularly airborne contamination.

The risk is elevated if measures to prevent physical contaminants entering food product are inadequate.

A.2.4.10 Item R10 - unpasteurized products. Food items that are considered excluded items (unpasteurized dairy products, unpasteurized juices, etc.) are prohibited from use in menus prepared for the DOD. Even with exclusion however, the possibility exists that personnel will still consume the product and therefore these food operations pose a greater risk.

The risk is extremely high in establishments that serve unpasteurized fruit or dairy products.

A.2.5 Section O, operations.

A.2.5.1 Item O1 - food safety plan. The assessor determines if a written food safety plan for the facility or caterer exists. If one exists, determine if the facility is following the provisions of the plan. Executing a food safety system is more significant than having the written plan. Assess the food safety threats in lieu of not having a plan. Identify and assess the risk of each food commodity to include all sources of water and the processes and equipment used.

The risk is elevated if the food safety plan is not executed correctly; *the risk is further elevated if they have a plan but it is not documented, or if there is no food safety plan at all.*

A.2.5.2 Item O2 - proper methods. Effective measures are taken to protect finished food from contamination by raw materials, other ingredients, refuse or pests. All leftovers (which

should be avoided) have production dates and times on their label. Special attention is paid to the cooling and reheating procedures if required. Opened foods being used remain covered unless they are in immediate use. These items are held or stored off the ground and away from walls.

The risk is elevated if leftovers are being used. The risk is further elevated if leftover foods kept after initial processing and preparation are not properly cooled, stored, labeled, protected, or reheated.

A.2.5.3 Item O3 - use of proper holding equipment. Sufficient amount of functional refrigerators, ovens, walk-in coolers, freezers, hot-holding displays, etc., are available to support the size of the operation, exercise or event. Equipment is constructed and placed in such a manner that drip or condensate from fixtures, ducts and pipes does not contaminate food, food-contact surfaces, or food-packaging materials.

The risk is elevated if there is insufficient or faulty equipment to maintain food protection. The risk is further elevated if equipment is constructed or used in a manner which contaminates food.

A.2.5.4 Item O4 - protecting food from contamination. Management enforcement of established food protection rules and policies is evident. The space between equipment and walls is of such width to permit employees to perform their duties and to protect against contaminating food or food-contact surfaces with clothing or personal contact. Employee traffic flow should prevent cross contaminations between raw and cooked items.

The risk is elevated when employees are observed contaminating food or not following good food protection practices.

A.2.5.5 Item O5 - temperature control processes. Foods that can support the rapid growth of undesirable microorganisms, particularly those of public health significance, are held in a manner that protects the wholesomeness and quality of food. This may be accomplished by any effective means, including: maintaining refrigerated foods at 41^{o} F (5^{o} C) or below; maintaining frozen foods in a frozen state; and maintaining hot foods at 135^{o} F (57^{o} C) or above.

The risk is elevated if temperature deviations in cooking, holding, and cooling processes are found. The risk is further elevated when the establishment does not have proper temperature control capabilities.

A.2.5.6 Item O6 - cross contamination. Cross contamination can increase the risk of foodborne illness. Items are handled with clean and impervious gloves or properly washed hands. Food contact surfaces are clean, and any utensils being used are also clean. Proper product segregation (raw from ready-to eat (RTE)) is enforced at all times to ensure cross-contamination does not occur.

The risk is elevated when food contact surfaces are not clean. The risk is also elevated if food items are not properly handled or segregation procedures are not practiced.

A.2.5.7 Item O7 - raw fruits and vegetables (FF&V). Raw FF&V are thoroughly washed in potable water to remove soil and other contaminants before being cut, combined with other ingredients, cooked, served, or offered for human consumption in RTE form. When chlorine solution is used for disinfecting whole fresh fruits and vegetables, they are used at a 50-200 parts per million concentration level with a 1 minute contact time. Alternative methods may be used that meet public health equivalency standards. Regardless of method used, all results are verified by the establishment and the assessor. Test strips should be available to verify concentrations.

The risk is elevated when there is no washing process used; or, if improper concentration or contact times are not being used.

A.2.6 Section C, cleaning and sanitizing.

A.2.6.1 Item C1 - warewashing operations. Cleaning and sanitizing is based upon the types of operations available at the facility, operation, or exercise site.

a. If an automatic warewashing machine is used, the assessor ensures an easily accessible and readable data plate is affixed to the machine by the manufacturer that indicates the machine's design and operation specifications. Alternatively, manufacturer's specifications and instructions are readily available. The specifications include temperatures required for washing, rinsing, and sanitizing. The warewashing machine is also assessed for a temperature measuring device that indicates the temperature of the water; these devices are needed for each wash and rinse tank, and as the water enters the hot water sanitizing final rinse manifold or in the chemical sanitizing solution tank.

b. If manual cleaning and sanitizing is performed, the ideal situation is proper use of a 3-compartment sink system. If less than 3 sinks are used, the assessor checks for a 3-process system that washes, rinses, and sanitizes equipment and utensils properly. If hot water is used for sanitization in manual operations, the sanitizing compartment of the sink is at a temperature not less than 77°C (171°F) and a rack or basket is needed to allow complete immersion of equipment and utensils into the hot water (30 seconds). If chemical sanitizers are used in either mechanical or manual processes they are used in accordance with manufacturers' instructions.

The risk is elevated when automated warewashing machinery is not properly equipped, to include available specifications and instructions; is not operated IAW manufacturer's instruction; or when manual warewashing equipment is not present, sufficient, or properly used.

A.2.6.2 Item C2 - cleaning of food contact surfaces. Food-contact surfaces are those surfaces that contact human food and those surfaces from which drainage onto the food or onto surfaces that contact the food ordinarily occurs during the normal course of operations. Food-contact surfaces include utensils and food-contact surfaces of equipment. All cleaning and sanitizing is conducted in a manner that protects against contamination of food, food-contact surfaces, food-packaging materials, and to avoid or prohibit splash contamination of other areas. All food-contact surfaces, including equipment and utensils are cleaned as frequently as necessary to protect against contamination of food. The assessor evaluates the facilities program

for verification and monitoring proper cleaning and sanitizing procedures. If chemical sanitizers are used, a verification process is in place to ensure correct concentrations.

The risk is elevated when proper procedures are not followed for the cleaning of food contact surfaces. The risk is also elevated when manual warewashing operations are contaminating other areas. The risk is also elevated if there is no verification or monitoring of proper techniques performed.

A.2.7 Section D, food defense.

A.2.7.1 Item D1 - secured facility. Physical security measures include protecting perimeter access with fencing or other deterrents. Doors are secured (including freight loading doors and emergency exits when not in use) or are monitored. Security is checked on windows, roof openings/hatches, vent openings, ventilation systems, utility rooms, ice manufacturing and storage rooms, loft areas, trailer bodies, and bulk storage tanks for liquids, solids, and compressed gases. Monitoring the security of the premises using appropriate methods (guards or active video monitoring) is often an effective deterrent to intruders. Controlled parking areas for employees and visitors are also implemented. Internal product flow is monitored and controlled to preclude intentional contamination.

The risk is elevated if the facility food defense program does not include a majority of the food defense mitigation measures noted; the risk escalates to higher levels when more physical security measures (active video monitoring, armed guards, etc.) are absent.

A.2.7.2 Item D2 - Background checks, personnel identification and access systems. Personnel identification and access systems include but are not limited to examining the background of all staff as appropriate to their position. Consider personnel access to sensitive areas of the facility and the degree to which they will be supervised and other relevant factors (for example, having a criminal background check performed by local law enforcement or by a contract service provider).

a. For personnel identification, establishing a system of positive identification and recognition (for example, issuing uniforms, name tags, or photo identification badges with individual control numbers, color coded by area of authorized access), when appropriate. The establishment collects these when a staff member is no longer associated with the establishment.

b. Management reassesses levels of access for all staff periodically. Staff access to non-public areas is controlled, so staff enters only those areas necessary for their job functions and only during appropriate work hours. The establishment changes combinations, re-keys locks or collects the retired key card when a staff member who is in possession of these is no longer associated with the establishment, and additionally as needed to maintain security.

The risk is elevated if no background checks are conducted. Risk is further elevated if employee identification or access systems are not implemented and controlled. If none of the item measures are in place, the risk is significant.

A.2.7.3 Item D3 - personal items. Employee's personal items are prohibited in food preparation areas. This includes restricting the type of personal items allowed in non-public areas of the establishment. Only those personal use medicines that are necessary for the health of staff are allowed to enter the facility, and those personal use medicines are properly labeled and stored away from stored food and food preparation areas. Personnel are prevented from bringing personal items (lunch containers, purses, etc.) into food preparation or storage areas.

The risk is elevated if employee personal items are not screened upon entrance into the establishment. The risk is further elevated if employee personal items are not secured and randomly inspected by the establishment management; or when employees are not prevented from bringing personal items into food processing areas.

A.2.7.4 Item D4 - security of food deliveries. Using unsecured food conveyance vehicles poses risk of intentional contamination. Assessors evaluate food delivery security measures. This assessment includes observing the use of seals or locks on delivery doors; reviewing delivery procedures (such as not accepting unexplained, unscheduled deliveries or drivers, and investigating delayed or missed shipments); and through interviews and documentation (for example establishing delivery schedules) provided. Incoming products are inspected for signs of tampering, contamination or damage, and suspect food is rejected. The establishment has procedures in place for alerting appropriate law enforcement and public health authorities about evidence of tampering, counterfeiting, or other malicious, criminal, or terrorist action. Assessors assign risk based on observation, interviews, and documentation review.

The risk is elevated when there are no physical security measures in place for vehicles. Risk is further elevated when there is no delivery inspection process used by the facility, or there is no process for reporting security violations to the proper authorities.

A.2.8 Section E, exercises and operations.

A.2.8.1 Item E1 - facility capability. The facility is be evaluated to determine how many meals that can be safely served. The evaluation includes equipment, processes, personnel, transportation, etc. Small food operations that surge to accommodate increased demands are more prone to compromise normal sanitation measures to meet these demands. Estimate the number of Service members the food operation can safely serve per meal. This is accomplished by questioning the food service manager about the normal food serving capacity, maximum food serving capacity, and what steps are used to handle maximum capacity situations. Compare this number to its intended use (synchronize with feeding plan and contractor’s intent).

The risk is elevated when a facility is used or is planned to be used beyond its determined (by assessor) safe serving capacity. Risk is further elevated when routine operations or processes are altered while surging to meet increased demands.

A.2.8.2 Item E2 - feeding plan use of approved sources. Using approved food sources reduces the risk of foodborne illness. The Operational or Exercise Commander or their representative is responsible for selecting food operations that carry an acceptable balance of feasibility and food protection. If there are no sanitarily approved sources reasonably available,

the assessor determines if there are large, local reputable suppliers that regularly export to the United States that can be used. If the facility has a supplier certification program, or an incoming receipt inspection program in place, this helps mitigate risk.

The risk is elevated when unapproved food sources are used. Risk is further elevated when suppliers of unapproved food sources are not evaluated regularly by the establishment. Risk is significant when the assessor notes (observation or record review) food protection issues related to food suppliers.

A.2.8.3 Item E3 - higher risk feeding operations. Assessors identify feeding operations where the risk of foodborne illness is elevated, and then engage medical authorities, operational planners and food contractors to discuss mitigation measures to the risks found, prior to the start of the operation or exercise. Mitigation measures include stationing medical personnel at the food operation to train and monitor during the operation or exercise; on-site VS, Preventive Medicine (PM) or Environmental Health (EH) personnel increases the probability that FWRA risk recommendations will be implemented. Having organic medical personnel (trained in food protection concepts) monitoring the operation may be an alternative when VS, PM, or EH assets are not available. Facility personnel are trained in food protection concepts. VCOs perform commercial food protection audits to provide lower risk approved food sources.

The risk is elevated when higher risk food operations have not been systematically identified by operational, exercise and medical planners, food contractors, and VS personnel. Risk is further elevated when higher risk food operations do not execute identified foodborne illness mitigation measures (such as stationing VS or PM personnel at the food operation). Risk is significant when higher risk food operations receive no foodborne illness mitigation measures.

A.2.8.4 Item E4 - transport containers. The assessor determines if the food operation will transport food in support of the operation or exercise. This determination will require communications with the food planner and contractor. If used, transport containers are assessed by their degree of food protection (clean, well maintained, capable of maintaining proper temperatures, and properly secured).

The risk is elevated when transport containers have inadequate food protection measures.

A.2.8.5 Item E5 - foodborne illness reports. The assessor collaborates with preventive medicine and other supporting medical service personnel to determine if there is an elevated number of suspect foodborne illness cases associated with consumption of food from the assessed facility. The capabilities of FOBs to investigate any linkages between facilities and illnesses, and definitively diagnose foodborne illness are seen inconsistent. The assessor bases the health risk rating on available data and medical service personnel input.

The risk is elevated on FOBs when VS personnel are not collaborating with preventive medicine and other medical service personnel to prevent, detect, and mitigate foodborne illnesses. Risk is further elevated when foodborne illness data is not available. Risk is significant when data or medical service personnel input suggest that a food operation may be the source of foodborne illness.

A.2.8.6 Item E6 - foodborne illness prevention and response training. Recognizing and mitigating the impact of foodborne illness requires routine prevention training and a coordinated and rehearsed response. Foodborne illness prevention and response training including table-top exercises improve this response by identifying roles and responsibilities in advance.

The risk is elevated when collaborative (VS, PM, Medical Services) foodborne illness training or exercises are not conducted.

A.2.8.7 Item E7 - health risk communication. Communicating the results of FWRA is most effective as a medical team. When the assessor determines that a foodborne illness threat exists at a food operation, they meet with key stakeholders to build a consensus on the need to take action. Key stakeholders include PM, medical services, force protection, dining facility management, Brigade Food Service Officer or NCO, and FOB Mayor. All key stakeholders are present during the meeting with the Operational Commander to communicate the risk and increase the probability that mitigations will be accepted.

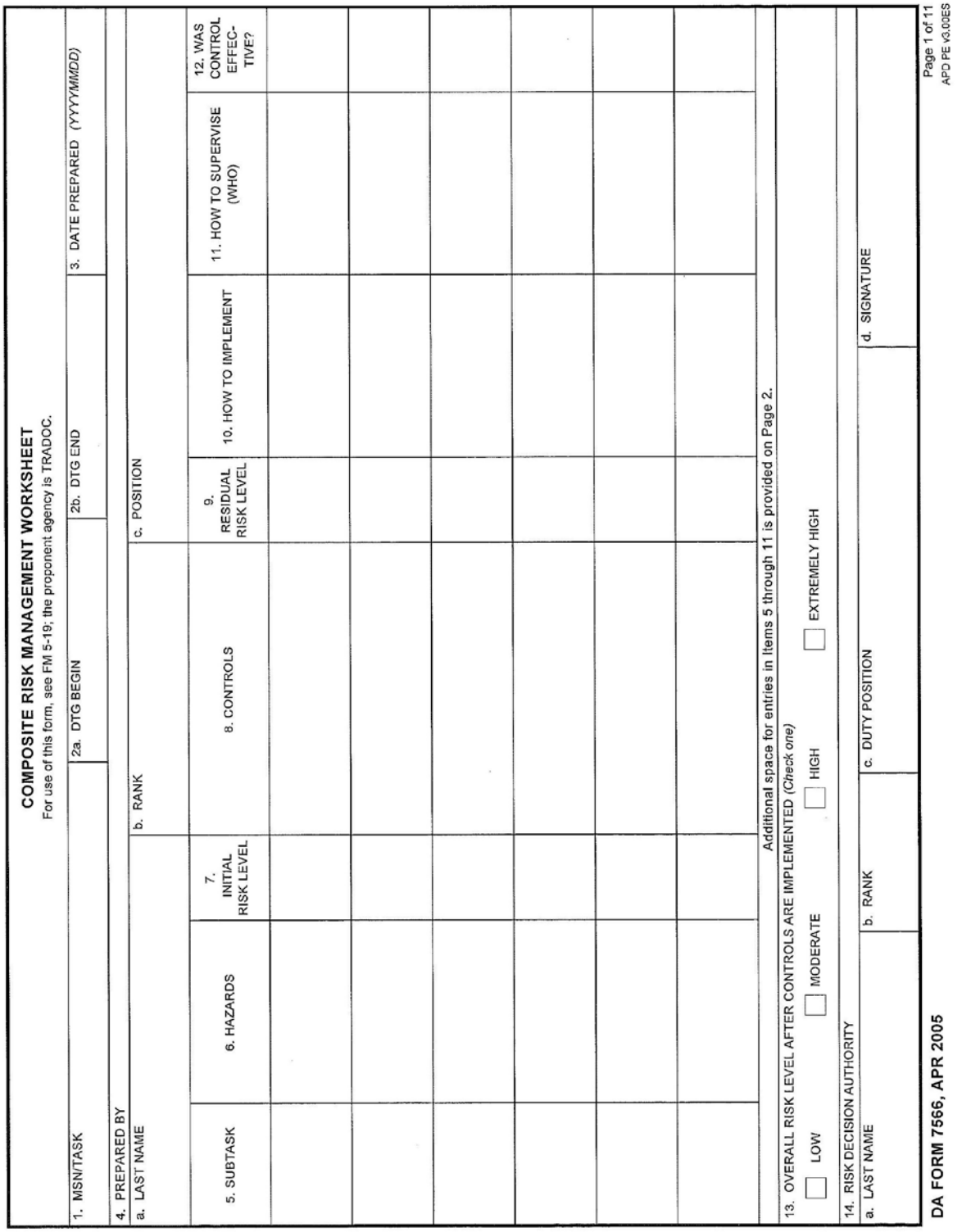
The risk is elevated when FWRA findings are not supported by all key stakeholders and not communicated to FOB leadership as a complete medical team.

A.2.9 Step II, risk description.

A.2.9.1 Items to address. Items that were rated high or extremely high in Step I are required to be further explained in the narrative. These are considered significant risks and may affect the final residual foodborne illness threat level.

A.2.9.2 Scoring risk. The highest initial and residual risks found will be transferred and reported at the top of the first page of the checklist. Any food items that are excluded will also be annotated in this area.

A.2.10 Step III, remarks. Administrative remarks can be entered into this area. Any additional information about the facility, food items, or other data the assessor deems pertinent may be listed. Remarks are also entered if there are items rated moderate risk that the assessor wants to expand on, particularly if the assessor feels the item may go to a high or extremely high risk if current food protection conditions or practices change or are eliminated. This is also an area where the assessor is encouraged to note items or areas of excellence in the establishment's food protection program.



COMPOSITE RISK MANAGEMENT WORKSHEET

For use of this form, see FM 5-19; the proponent agency is TRADOC.

1. MSN/TASK	2a. DTG BEGIN	2b. DTG END	3. DATE PREPARED *(YYYYMMDD)*

4. PREPARED BY

a. LAST NAME	b. RANK	c. POSITION

5. SUBTASK	6. HAZARDS	7. INITIAL RISK LEVEL	8. CONTROLS	9. RESIDUAL RISK LEVEL	10. HOW TO IMPLEMENT	11. HOW TO SUPERVISE (WHO)	12. WAS CONTROL EFFEC-TIVE?

Additional space for entries in Items 5 through 11 is provided on Page 2.

13. OVERALL RISK LEVEL AFTER CONTROLS ARE IMPLEMENTED *(Check one)*

☐ LOW ☐ MODERATE ☐ HIGH ☐ EXTREMELY HIGH

14. RISK DECISION AUTHORITY

a. LAST NAME	b. RANK	c. DUTY POSITION	d. SIGNATURE

DA FORM 7566, APR 2005

Page 1 of 11
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FIGURE A-2. **Composite Risk Management Worksheet**

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FOOD & WATER RISK ASSESSMENT CHECKLIST

Initial Foodborne Illness Risk Level: ○ Low ○ Moderate ○ High ● Ext High

Residual Foodborne Illness Risk Level: ○ Low ● Moderate ○ High ○ Ext High

Foods to Exclude: Ready to eat ham and cheese slices.

Command:	**Date:** 25 March 2012
Step- I: On-site Assessment	
Establishment Name: Ptomaine's 4 Star Hotel Address: 1 Scary Place, True town Country: ZZ	Phone: 0101-33276-84 Email : Ptomaine@yuck.com

Select the initial risk level for each item, using the Risk Chart as a guide. Only items rated High or Extremely High (EH) are considered significant risks and require description in Step II.

Items	Initial Risk Level
Buildings (Items B1-8)	
B1. Physical facilities are designed to facilitate maintenance and sanitary operations (i.e., food preparation, storage, toilet facilities).	○ Low ● Mod ○ High ○EH
B2. Grounds and facilities are maintained to prevent the entrance and harborage of pests.	○ Low ● Mod ○ High ○EH
B3. Food waste and trash are disposed of properly.	● Low ○ Mod ○ High ○EH
B4. Delivery vehicles are in good condition, easily cleanable, and able to maintain correct temperatures (i.e., chill & frozen subsistence).	○ Low ● Mod ○ High ○EH
B5. Refrigerated, frozen and dry storage areas are designed to be cleaned, sanitized and capable of maintaining foods at required temperatures.	○ Low ● Mod ○ High ○EH
B6. Temperature-measuring devices are used, properly located, calibrated, maintained, and easily readable; temperatures are checked and logged on a set frequency; facility possesses cooking thermometers for all cooking operations.	○ Low ● Mod ○ High ○EH
B7. There is lighting and protection against glass breakage (including shatter-proof light bulbs or light shields) over exposed foods, processing equipment, utensils, and food containers.	● Low ○ Mod ○ High ○EH
B8. Hand-washing facilities (field expedient handwashing facilities or other) are provided and conveniently located; only potable or disinfected non-potable water is used.	○ Low ● Mod ○ High ○EH

FIGURE A-3. **Example Food and Water Risk Assessment Checklist**

Personnel (Items P1-4)	
P1. Employees are medically screened and free of contagious diseases.	● Low ○ Mod ○ High ○EH
P2. Employees are routinely trained in food safety, food defense, and personal hygiene.	○ Low ● Mod ○ High ○EH
P3. Employees that work in processing areas are free from jewelry or other items that could adulterate food items.	● Low ○ Mod ○ High ○EH
P4. Employees wash hands thoroughly or change gloves after each absence from the workstation, and at any other time the hands may have become soiled or contaminated.	○ Low ○ Mod ● High ○EH
Raw Materials (Items R1-10)	
R1. Raw materials are wholesome and free from endemic food and waterborne illness infectious disease agents, pests and hazardous agricultural processes.	○ Low ● Mod ○ High ○EH
R2. Raw materials and other ingredients are purchased from approved sources.	○ Low ○ Mod ● High ○EH
R3. Raw materials and other ingredients are inspected at receipt.	● Low ○ Mod ○ High ○EH
R4. Raw materials are properly handled at all times to protect them from contamination.	○ Low ○ Mod ○ High ●EH
R5. Laboratory testing program is used to verify food safety.	○ Low ● Mod ○ High ○EH
R6. Potable water is used as an ingredient or in preparation of ready-to-eat foods (i.e., ROWPU, bottled or packaged water, government approved source).	○ Low ● Mod ○ High ○EH
R7. When ice is used in contact with food, it is made from water that is laboratory tested to ensure safe sanitary quality (potable).	○ Low ● Mod ○ High ○EH
R8. Ice is prohibited as an ingredient in other foods after it has been used as an external coolant.	● Low ○ Mod ○ High ○EH
R9. Methods to exclude physical contaminants are established and monitored.	○ Low ● Mod ○ High ○EH
R10. Unpasteurized fruit juices or dairy products are prohibited from use.	● Low ○ Mod ○ High ○EH
Operations (Items O1-7)	
O1. A food safety plan has been documented and implemented for each product produced with identified hazards.	○ Low ● Mod ○ High ○EH ○ NA
O2. Proper methods (opened foods labeled, dated, covered, and protected from pest contamination, etc.) are used when food is not in use, or during storage.	● Low ○ Mod ○ High ○EH
O3. Refrigeration, cooling, heating and hot holding equipment is used to ensure safe food.	○ Low ● Mod ○ High ○EH

FIGURE A-3. **Example Food and Water Risk Assessment Checklist – Continued**

O4. Precautions are taken to protect food from being contaminated by employees.	○ Low ● Mod ○ High ○EH
O5. Temperature-control processes are used (i.e., thawing, cooking, holding, cooling, and reheating of PHFs).	○ Low ○ Mod ○ High ●EH
O6. The risks of cross-contamination in preparing foods are minimized.	○ Low ● Mod ○ High ○EH
O7. Raw fruits and vegetables are thoroughly washed and disinfected prior to processing.	○ Low ● Mod ○ High ○EH
Cleaning and sanitizing (Items C1-2)	
C1. Ware-washing operations use only potable water and proper, functional equipment.	● Low ○ Mod ○ High ○EH
C2. Food-contact surfaces are cleaned, sanitized, and verified.	○ Low ● Mod ○ High ○EH
Food Defense (Items D1-4)	
D1. The facility is secured and hardened against an intentional attack (i.e., perimeter, HVAC, and water system).	○ Low ● Mod ○ High ○EH
D2. Background checks and effective personnel identification and access systems are implemented.	○ Low ● Mod ○ High ○EH
D3. Employee's personal items are prohibited in food preparation areas.	○ Low ● Mod ○ High ○EH
D4. Food delivery security measures are in place.	● Low ○ Mod ○ High ○EH
Exercises & FOBs (Items E1-7)	
E1. The assessed facility's capability align with the feeding plan or contractor's intended use (i.e., ability to safely provide the number of meals required, capable of safely delivering catered meals to field feeding sites).	○ Low ● Mod ○ High ○EH ○ NA
E2. The feeding plan effectively uses logistically feasible approved sources.	○ Low ○ Mod ○ High ○EH ● NA
E3. Higher risk feeding operations are identified and mitigated within the feeding plan.	○ Low ○ Mod ○ High ○EH ● NA
E4. Containers used to transport food are clean and maintained to protect food items.	○ Low ○ Mod ○ High ○EH ● NA
E5. Medical services are not seeing an elevated number of suspected foodborne illnesses from this facility.	○ Low ○ Mod ○ High ○EH ● NA
E6. Foodborne illness prevention and response training or exercises are conducted.	○ Low ○ Mod ○ High ○EH ● NA
E7. All identified health risks are communicated by medical team authorities (Veterinary, PM, Medical) to the Operational Commander.	○ Low ○ Mod ○ High ○EH ● NA

FIGURE A-3. **Example Food and Water Risk Assessment Checklist - Continued**

Initial Risk Estimate Chart

HAZARD SEVERITY	HAZARD PROBABILITY				
	Frequent (A)	Likely (B)	Occasional (C)	Seldom (D)	Unlikely (E)
Catastrophic (I)	Extremely High	Extremely High	High	High	Moderate
Critical (II)	Extremely High	High	High	Moderate	Low
Marginal (III)	High	Moderate	Moderate	Low	Low
Negligible (IV)	Moderate	Low	Low	Low	Low
	RISK ESTIMATE				

Frequency:

Frequent: occurs very often, continuously experienced.

Likely: occurs several times.

Occasional: occurs sporadically

Seldom: remotely possible, could occur at some time.

Unlikely: can assume will not occur; but not impossible

Severity:

Catastrophic: loss of ability to accomplish the mission or mission failure. Example indicators: death or widespread severe illness.

Critical: significantly (severely) degraded mission capability or unit readiness. Example indicators: Multiple foodborne illness incidences.

Marginal: degraded mission capability or unit readiness. Example indicators: Sporadic foodborne illness, loss of confidence in food supply safety.

Negligible: little or no adverse impact on mission capability.

FIGURE A-3. **Example Food and Water Risk Assessment Checklist - Continued**

Step-II Risk Description
** Only address items from Step I rated High or Extremely High (Significant Risks)*

Significant Initial Risk (SIR) – Item #: P4

● High ○ EH

Describe SIR: Employees do not make it a routine to wash hands after soiling or contamination; some employees observed with gloves badly soiled and in bad repair.

Mitigation for SIR: Retrain employees in hand washing and glove rules; increase monitoring by supervisors; ensure the supply of gloves is available and easily accessible.

Residual Risk When Mitigated: ● Low ○ Mod ○ High ○ EH

Product Exclusions (if not mitigated):

● None

Reason for Exclusion:

FIGURE A-3. **Example Food and Water Risk Assessment Checklist - Continued**

Significant Initial Risk (SIR) – Item #: R2

● High ○ EH

Describe SIR: 2 cheese items (American and Swiss), and 1 salad item (macaroni salad) do not originate from sanitarily approved sources. Management is actively seeking approved sources now for both. All other items could be traced back to approved source suppliers.

Mitigation for SIR: Ensure all items are purchased from sanitarily approved sources; request Initial Food Protection audits if necessary. Switch menu items to different style sandwiches and salads.

Residual Risk When Mitigated: ● Low ○ Mod ○ High ○ EH

Product Exclusions (if not mitigated):

● None

Reason for Exclusion:

FIGURE A-3. **Example Food and Water Risk Assessment Checklist - Continued**

Significant Initial Risk (SIR) – Item #: R4

○ High ● EH

Describe SR: Ready-to-eat ham and cheese slices for sandwiches were received uncovered upon delivery. They were then transported on dirty carts in a high dust area to the kitchen. When prepping these items for use, soiled utensils were used, as well as bare hands by the employees. Management indicated it was too expensive to change the process and they didn't have the manpower to correct these issues.

Mitigation for SIR: Ensure items are received protected from contamination. Ensure equipment and utensils used in conveying and handling these items are clean, and gloves are used by employees.

Residual Risk When Mitigated: ○ Low ● Mod ○ High ○ EH

Product Exclusions (if not mitigated): Ready to eat ham and cheese slices.

○ None

Reason for Exclusion: Probability of mitigation is very low due to unwillingness of management to disrupt work flow or invest the money in small equipment items or additional personnel.

FIGURE A-3. **Example Food and Water Risk Assessment Checklist - Continued**

Significant Initial Risk (SIR) – Item #: O5

○ High ● EH

Describe SIR: Proper cooling procedures for soups and chili were not in place. Items were allowed to sit in the kitchen after use for extended periods of time without temperature control. When these items were stored, they were left in large, tall pots in the cooler without additional cooling measures taken.

Mitigation for SIR: Distribute large quantities of soup and chili into smaller, shallow containers; place the containers in ice baths; store in refrigerators immediately; if stored in walk-in cooler use fans to provide additional and more rapid cooling.

Residual Risk When Mitigated: ○ Low ● Mod ○ High ○ EH

Product Exclusions (if not mitigated):

● None

Reason for Exclusion:

FIGURE A-3. **Example Food and Water Risk Assessment Checklist - Continued**

Significant Initial Risk (SIR) – Item #:
○ High ○ EH

Describe SIR:

Mitigation for SIR:

Residual Risk When Mitigated: ○ Low ○ Mod ○ High ○ EH

Product Exclusions (if not mitigated):
○ None

Reason for Exclusion:

(continue on blank page if necessary)

FIGURE A-3. **Example Food and Water Risk Assessment Checklist – Continued**

STEP-III REMARKS
(Remarks are optional for Administrative items, items rated Moderate, and items of excellence)

Administrative - Facility is inspected by ZZ Ministry of Health. All employees undergo physical exam before hire and annually thereafter. The hotel is located in the business district of True town. The physical facilities are adequate for the operation. The facility is equipped with a standby generator. The garbage is housed in a facility that is separate from the food processing areas and collected daily by a private company. Facility has a pest management program that is managed by licensed pest management company. Ptomaine's feeds approximately 60 per day.

The following Moderate (Initial) Risk items are of additional concern:

P2 – Some employees demonstrated a lack of food safety knowledge. This could result in an elevation of the risk if training and monitoring is not increased.

O1 – There were gaps in the implementation of the hotel's food safety plan. A written plan existed, but it looked like a corporate level or generic plan, and did not specifically address all processes in the food operation. This could result in an elevation of the risk if not changed to reflect all of the processes present.

O3 – 1 cooler was missing a thermometer; there was also condensation seen dripping in the main refrigeration walk-in box (#2). These deficiencies could result in an elevation of the risk if not corrected.

D1 – There were no fences or other barriers around the hotel – this is the norm for this region. However, some of the other items (cameras and background checks) were not totally effective in ensuring all possible food defense measures were in place. This could result in an elevation of the risk in food defense if not improved.

Items of Excellence:

P1 – Excellent medical screening program, both upon initial employment and annually thereafter.

O2 – Excellent system for the labeling and storing of leftovers. Processes ensure a small amount of leftovers are stored, and they are used again within 24 hours or discarded.

C1 – Brand new state of the art warewashing machine is in place that is fully compliant.
(*continue on blank page if necessary*)

Operational Commander/Representative	**Risk Assessor**
Name/Rank: I.M. Foodguy **Phone: (123) 456-5432** **Email: IMFGRep@contactm.com**	**Name/Rank: Zippity, Jerome, MAJ** **Phone: (200) 300-9999** **Email: Je.Zippity7@us.army.mil** **Signature:** *Jerome Zippity*

FIGURE A-3. **Example Food and Water Risk Assessment Checklist - Continued**



DEPARTMENT OF THE ARMY
PUBLIC HEALTH COMMAND DISTRICT-NORTH EUROPE
UNIT 23152
APO AE 09227

REPLY TO
ATTENTION OF

MCVS-EUN 27 March 2012

MEMORANDUM FOR Commander USAREUR, G-22 Exercise Division, ATTN: << Name >>

SUBJECT: Food & Water Risk Assessment for the Zulu Training Area, ZZ, in Support of Exercise Snake Rattler 2012

1. A Food & Water Risk Assessment (FWRA) was conducted on Ptomaine's 4 Star Hotel, 1 Scary Place, True town, ZZ, by MAJ Jerome Zippity on 25 March 2012, in support of Exercise Snake Rattler, scheduled for May 2012. This assessment determines the level of risk exposure for troops consuming food and water if procured or consumed from the assessed establishment during the mission.

2. The assessment determined an initial risk to personnel consuming food produced by this hotel. The results of this assessment identifying specific findings and areas assessed within the facility are included at Enclosure 1, Food and Water Risk Assessment checklist. Initial risk levels can be classified as extremely high, high, moderate or low. The initial risk level for this facility is: EXTREMELY HIGH.

3. Recommended mitigation measures included on the checklist must be implemented to reduce risk to personnel. If implemented, the initial risk level can be reduced to a residual risk level of MODERATE.

4. Acceptance of final risk is the responsibility of the appropriate commander. FWRAs are to be used as a Commander's tool to mitigate risk; they are not equal to formal food protection audits, and therefore do not result in the approval for listing in the *Worldwide Directory of Sanitarily Approved Food Establishments for Armed Forces Procurement.*

5. Significant Risk Recommendations and Control Measures to implement:

a. Provide enclosed FWRA checklist to the exercise Commander and facility for implementation prior to the exercise.

b. Ensure the following significant initial risks (SIRs) are specifically addressed by the facility prior to the exercise as deviations from these recommendations could lead to Foodborne Illness:

FIGURE A-4. **Example of cover memorandum**

MCVS-EUN
SUBJECT: Food & Water Risk Assessment for the Zulu Training Area, ZZ, in Support of Exercise Snake Rattler 2012

(1) Employees do not make it a routine to wash hands after soiling or contamination; some employees observed with gloves badly soiled and in bad repair. Mitigation for SIR: Retrain employees in hand washing and glove rules; increase monitoring by supervisors; ensure adequate supply of gloves is available and easily accessible.

(2) Two cheese items (American and Swiss), and 1 salad item (macaroni salad) do not originate from sanitarily approved sources. All other items could be traced back to approved source suppliers. Mitigation for SIR: Ensure all items are purchased from sanitarily approved sources; request Initial Food Protection audits if necessary. Switch menu items to different style sandwiches and salads.

(3) Ready-to-eat ham and cheese slices for sandwiches were received uncovered upon delivery. They were then transported on dirty carts in a high dust area to the kitchen. When prepping these items for use, soiled utensils were used, as well as bare hands by the employees. Management indicated it was too expensive to change the process and they didn't have the manpower to correct these issues. Mitigation for SIR: Ensure items are received adequately protected from contamination. Ensure equipment and utensils used in conveying and handling these items are clean, and gloves are used by employees. These items must be excluded from the feeding plan unless mitigation strategies are followed and monitored.

6. Questions regarding this FWRA can be addressed to MAJ Jerome Zippity at jerome.zippity88@best.army.mil, DSN 400-9999.

Jerome Zippity

Encl

JEROME ZIPPITY
MAJ,VC
FWRA Team Lead

FIGURE A-4. **Example of cover memorandum – Continued**

MCVS Date

MEMORANDUM FOR RECORD SUBJECT: TDY After-Action Report (AAR)

1. PURPOSE: To perform Food & Water Vulnerability Risk Assessment in True town, ZZ. AAR represents MAJ Jerome Zippity, U.S. Army Veterinary Corps Officer.

2. DATES: 24-25 March 2012

a. 23 and 27 MAR 2012 travel days.

b. 24 MAR 2012 12 In-Brief with US Embassy MLO/TCA

c. 25 MAR 2012 Visited Ptomaine's 4 Star Hotel

d. 26 MAR 2012 Out-Brief with MLO/TCA

3. PERSONNEL CONTACTED: Met with representatives from hotels listed in paragraph 2. 1LT Xxxx MLO OIC, SSG Xxxx MLO NCOIC, Johnny Xxxx MLO Driver, US Ambassador to Country ZZ, and several others.

4. SUMMARY OF TDY:

a. The entire MLO/TCA group was incredibly helpful, resourceful, patient, and understanding during this TDY. Although small in numbers, they provided the escort, driver and translator for all the hotel assessment in 2 above. They made every attempt to allow us as much time (as time allowed) to complete the assessment. Without the MLO's assistance, the TDY would have been extremely difficult and might have required extra days on the ground. It is imperative to make early contact with these individuals as far in advance of the assessment as possible.

FIGURE A-5. **Example of after-action report**

MCVS
SUBJECT: TDY After-Action Report (AAR)

b. Performed the Food & Water Risk Assessments (FWRA) on Ptomaine's 4 Star Hotel. The Food and Water Risk Assessment checklist was used to evaluate them. The hotel received an "EXTREMELY HIGH" initial risk, which can be reduced to "MODERATE" residual risk if mitigation strategies are followed. Two food items must be excluded from the feeding plan. See enclosed completed checklist and cover memorandum for further specifics.

c. The hotel was given a copy of Circular 40-1, Appendix B, Initial Sanitation Audit Requests and blank Pre-Audit Questionnaire, for future use to help solve their approved sources problem. Answered additional questions, collected business cards, and pulled bottle water samples for lab analysis from each. Results of lab analysis showed the hotel water had passed their test.

d. There was intent to also visit some ice plants, as the hotel indicated their ice making capabilities would not meet future demands. However, the country does not have any large manufacturers and as such none were visited. Embassy MLO/TCA group mentioned that ice has not been in high demand in the past, but agreed with the hotel that future demand will increase.

5. FOLLOW UP ACTIONS:

a. FWRA: Post completed checklist and cover memorandum to the USAVSAP and submit to U.S. Army Command (ARCOMM). Submit cover memorandum to Embassy MLO.

b. AAR: Submit completed AAR to ARCOMM & Embassy MLO/TCA.

6. CLOSING: POC for this action is the undersigned at phone number (210) 221-XXXX.

Encls.

Jerome Zippity
JEROME ZIPPITY
MAJ, VC
Chief, Gold Branch Veterinary Service

FIGURE A-5. **Example of after action-report - Continued**

CONCLUDING MATERIAL

Custodians:
Army - MD2
Navy-SA
Air Force- 03

Preparing Activity:
Army - MD2
(Project No. 89GP-2011-002)

Review activities:
DLA - SS

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at https://assist.dla.mil