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DEPARTMENT OF DEFENSE STANDARD PRACTICE

REQUIREMENTS FOR FOOD AND WATER RISK ASSESSMENTS (FWRA)

AMSC N/A FSG 89GP

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

FOREWORD

1. This standard 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 standard, 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 standard has been developed to standardize the method 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 standard sets forth the requirements for assessing the food protection risk in commercial food establishments, including manufacturing and direct-feeding facilities, as well those supporting military operations and exercises.

4. This standard is used in conjunction with the guidelines specified in MIL-HBK-3041, Guidelines for Conducting Food and Water Risk Assessments, 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.

CONTENTS

CONTENTS

CONTENTS

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1. SCOPE

1.1 Scope. This standard establishes requirements related to assessing the food protection risk of commercial food establishments, Forward Operating Bases (FOBs), foreign dining facilities, and feeding locations supporting military operations and exercises.

a. The related DOD policy is contained in DODVSA policy documents and AR 40-657/NAVSUPINST 4355.4H/MCO P1010.31G (under revision). This standard 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 standard 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 standard.

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 HANDBOOK

MIL-HBK-3041, Guidelines for Conducting Food and Water Risk Assessments

(Copies of this document are available online at http://quicksearch.dla.mil or https://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 standard.

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 Officer. Active duty and Reserve component Air Force officer holding the 43HX specialty.

3.6 Army Environmental Science & Engineering Officer. Active duty and Reserve component Army officer 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 incorporates 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 REQUIREMENTS

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 appropriate Operational 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 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.

4.3 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.

4.4 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 shall be provided. The mitigation is provided to tell both the facility and the applicable end-user representative what steps can be employed to reduce the initial risk level to a lower residual risk.

4.5 Laboratory testing. Laboratory testing is limited to water and ice. These items are tested on site or submitted to a DOD reference laboratory. Additional testing on site for sanitizing strengths shall be performed using test strips or other recognized means.

5. DETAILED REQUIREMENTS

5.1 General. The following appendix contains specific requirements related to the cited reference documents.

APPENDIX A - FOOD AND WATER RISK ASSESSMENT CHECKLIST REQUIREMENTS

6. NOTES

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

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

Deployed
Exercises
Laboratory
Mitigate
Operations

FOOD AND WATER RISK ASSESSMENT CHECKLIST REQUIREMENTS

A.1 SCOPE

A.1.1 Scope. This appendix provides information on the procedures for completing the food and water risk assessment checklist. This Appendix is a mandatory part of the standard. The information contained herein is intended for compliance.

A.2 PROCEDURES.

A.2.1 Checklist requirements. A brief explanation of the checklist requirements is provided. These may not be all inclusive.

A.2.2 Section B, buildings.

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

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. Be 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 shall not contaminate food, food-contact surfaces, or food-packaging materials. Aisles or working spaces shall be provided between equipment and walls for pest management concerns, shall be unobstructed, and shall be of such width to permit employees to perform their duties. Storage areas shall be large enough in size to reduce the likelihood of contamination.

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

A.2.2.2 Item B2 - grounds and facilities maintenance. The grounds around the facility shall be kept in such condition that will protect against the contamination of food. The methods for maintenance of grounds and facilities shall 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. Utilizing pest control to ensure that all forms of pests are addressed and controlled. The use of pest control and monitoring equipment shall be in accordance with manufacturers' guidance and shall not interfere with food safety and security procedures. The methods utilized shall be appropriate for the types of pests present.

A.2.2.3 Item B3 - waste disposal. Systems for waste holding and disposal shall be operated in a manner that does not constitute a source of contamination in areas where food is exposed. All litter and waste shall be removed on a regular basis. Rubbish and offal shall be so conveyed, stored, and disposed of as to minimize 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.

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

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

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

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

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 shall have a properly functioning thermometer, temperature-measuring device, or temperature-recording device. The sensor of a temperature measuring device shall be located to measure the air temperature or a simulated product temperature in the warmest part of a mechanically refrigerated unit and in the coolest part of a hot food storage unit. They shall not be broken, rusty or otherwise damaged, and shall have dials large enough to read, with the numbers still legible. Thermometers shall be calibrated, maintained, and logged, and shall be furnished for all cooking operations.

A.2.2.7 Item B7 - lighting. Sufficient lighting shall be provided in all areas where food is examined, processed, or stored and where equipment or utensils are cleaned. The facility shall

use 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.

A.2.2.8 Item B8 - hand washing facilities. Hand-washing facilities shall be convenient and shall be 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, a means of washing hands shall be provided.

e. For contracts requiring on-site preparation of food by catering employees, contract provisions shall be reviewed to ensure inclusion of appropriate hand washing equipment requirements.

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 shall include medical screenings for known disease risks in the FWRA area; screening of these diseases shall include blood tests, stool samples, chest x-rays, and physical exams. Employees that appear sick, having open lesions, etc., shall be excluded from food operations. Under these type programs, employees shall be instructed to report such health conditions to their supervisors.

A.2.3.2 Item P2 - training. Food safety and sanitation training shall be effective to include 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 may be formal classroom, group, individual, or on-the-job, and documentation shall be provided. Employees demonstrate knowledge (for example, time and temperature relationships and PHFs) of food safety and sanitation,

A.2.3.3 Item P3 - jewelry or loose objects. Employees that work in food processing and preparation areas shall be 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 shall also be removed. If such hand jewelry cannot be removed, it shall be 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.

A.2.3.4 Item P4 - hand washing and gloves. Employees shall 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 shall be used in food handling and shall be changed when needed (heavily soiled, torn, etc.).

A.2.4 Section R, raw materials.

A.2.4.1 Item R1 - wholesome. Raw materials shall be 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 shall be washed or cleaned as necessary to remove soil or other contamination.

A.2.4.2 Item R2 - approved sources. When non-approved food sources are used, quality raw materials (from a major supplier or reputable source) shall be used.

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

A.2.4.4 Item R4 - handling. Receipt, processing, and storage of food shall be 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 shall be protected against contamination. Equipment, containers, and utensils used to convey, hold, or store raw materials shall be constructed and maintained to protect against contamination.

A.2.4.5 Item R5 - laboratory testing program. Laboratory testing shall be performed to verify food and water safety, in accordance with paragraph 3.2.

A.2.4.6 Item R6 - potable water. The water supply shall be sufficient for the operations intended and shall be derived from a safe source. When evaluating the source, consideration shall be given to area infrastructure and conveyance on a continuing basis. The surrounding geographical area - farms, buildings, businesses, terrain, and other pertinent factors - shall not contaminate or otherwise adversely affect the water supply. Any water that contacts food or food-contact surfaces shall be of safe sanitary quality. Water potability documentation shall be available.

A.2.4.7 Item R7 - potable ice. When ice is used in contact with food or consumed in drinks, it shall be made from water that is safe. Water potability documentation shall be available.

A.2.4.8 Item R8 - limitation of use. Ice used to cool the exteriors of other food containers shall not be re-used as an ingredient in other items such as drinks; be mixed into other recipe items; be used in salad bars if in contact with food; or in other similar uses.

A.2.4.9 Item R9 - excluding physical contaminants. Food preparation and processing, cooking, transporting within processing areas and kitchens, assembling, and other operations shall be performed in such a way that the food is protected against contamination. Facilities may employ any effective sanitary means to accomplish this.

A.2.4.10 Item R10 - unpasteurized products. Food items that are considered excluded items (unpasteurized dairy products, unpasteurized juices, etc.) shall be prohibited from use in menus prepared for the DOD.

A.2.5 Section O, operations.

A.2.5.1 Item O1 - food safety plan. A written food safety plan for the facility or caterer shall exist, or the facility has executed a food safety system. If a written plan exists, the facility shall follow the provisions of the plan.

A.2.5.2 Item O2 - proper methods. Effective measures shall be taken to protect finished food from contamination by raw materials, other ingredients, refuse or pests. All leftovers (which should be avoided) shall have production dates and times on their label. Cooling and reheating procedures (if required) shall be implemented to safely produce or serve food. Opened foods being used shall remain covered unless they are in immediate use. These items shall be held or stored off the ground and away from walls.

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., shall be available to support the size of the operation, exercise or event. Equipment shall be 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.

A.2.5.4 Item O4 - protecting food from contamination. Management enforcement of established food protection rules and policies shall be evident. The space between equipment and walls shall be 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 shall prevent cross contamination between raw and cooked items.

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

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

A.2.5.7 Item O7 - raw fruits and vegetables (FF&V). Raw FF&V shall be 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, it shall be 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 shall be verified.

A.2.6 Section C, cleaning and sanitizing.

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

a. If an automatic warewashing machine is used, it shall have an easily accessible and readable data plate affixed to the machine by the manufacturer that indicates the machine's design and operation specifications. Alternatively, manufacturer's specifications and instructions shall be readily available. The specifications shall include temperatures required for washing, rinsing, and sanitizing. The warewashing machine shall also be equipped with a temperature measuring device that indicates the temperature of the water; these devices are required 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, a 3-process system is used 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 shall be at a temperature not less than 77°C (171°F) and a rack or basket is required 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 shall be used in accordance with manufacturers' instructions.

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. Cleaning and sanitizing of shall be conducted in a manner that protects against contamination of food, food-contact surfaces, or food-packaging materials. All cleaning and sanitizing operations shall be conducted in such a manner to avoid or prohibit splash contamination of other areas. All food-contact surfaces, including equipment and utensils shall be cleaned as frequently as necessary to protect against contamination of food. A system of verification and monitoring proper cleaning and sanitizing procedures shall be in place. If chemical sanitizers are used, a verification process shall be in place to ensure correct concentrations.

A.2.7 Section D, food defense.

A.2.7.1 Item D1 - secured facility. Physical security measures shall include protecting perimeter access with fencing or other deterrents. Doors shall be secured (including freight loading doors and emergency exits when not in use) or monitored. Security shall be 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 video surveillance) shall be employed. Controlled parking areas for

employees and visitors shall also be implemented. Internal product flow shall be monitored and controlled to preclude intentional contamination.

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. 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) is also required.

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

b. Management shall reassess levels of access for all staff periodically. Staff access to non-public areas shall be controlled, so staff enters only those areas necessary for their job functions and only during appropriate work hours. The establishment shall change combinations, re-key locks or collect 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.

A.2.7.3 Item D3 - personal items. Employee's personal items shall be 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 shall be allowed to enter the facility, and those personal use medicines shall be properly labeled and stored away from stored food and food preparation areas. Personnel shall be prevented from bringing personal items (for example, lunch containers, purses) into food preparation or storage areas.

A.2.7.4 Item D4 - security of food deliveries. Food delivery security measures include the use of seals or locks on delivery doors; reviewing delivery procedures (for example, not accepting unexplained, unscheduled deliveries or drivers, and investigating delayed or missed shipments). Incoming products shall be inspected for signs of tampering, contamination or damage, and suspect food shall be rejected. The establishment shall have procedures in place for alerting appropriate law enforcement and public health authorities about evidence of tampering, counterfeiting, or other malicious, criminal, or terrorist action.

A.2.8 Section E, exercises and operations.

A.2.8.1 Item E1 - facility capability. The facility shall be capable of providing safe meals in accordance with the feeding plan, to include large surge capability.

A.2.8.2 Item E2 - feeding plan use of approved sources. 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, large local reputable suppliers that regularly export shall be used.

A.2.8.3 Item E3 - higher risk feeding operations. Higher risk feeding operations shall be identified and mitigated within the feeding plan. Medical authorities, operational planners and food contractors shall be engaged to discuss mitigation measures when elevated foodborne illness health risks are identified. Facility personnel shall be trained in food protection concepts.

A.2.8.4 Item E4 - transport containers. If used, transport containers shall provide proper food protection (clean, well maintained, and capable of maintaining proper temperatures).

A.2.8.5 Item E5 - foodborne illness reports. Medical services are seeing an elevated number of suspected foodborne illnesses from this facility. FOBs shall demonstrate the capabilities of investigating any linkages between facilities and illnesses, and to definitively diagnose foodborne illness consistently.

A.2.8.6 Item E6 - foodborne illness prevention and response training. Foodborne illness prevention and response training or exercises shall be conducted.

A.2.8.7 Item E7 - health risk communication. All identified health risks shall be communicated by medical team authorities to the Operational Commander. All key stakeholders shall be present during meetings with the Commander to communicate the health risks and increase the probability that mitigations will be implemented.

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
APD PE V3.00ES

FIGURE A-1. **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:**	
Command:	**Date:**
Step- I: On-site Assessment	
Name: Address: Country:	Phone: Email :
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-2. **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 is performed 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-2. 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-2. **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-2. **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 #: ○ High ○ EH Describe SIR: Mitigation for SIR: Residual Risk When Mitigated: ○ Low ○ Mod ○ High ○ EH Affected Product Exclusions (if not mitigated): ○ None Reason for Exclusion:

FIGURE A-1. **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

Affected Product Exclusions (if not mitigated):
○ None

Reason for Exclusion:

FIGURE A-1. **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

Affected Product Exclusions (if not mitigated):
○ None

Reason for Exclusion:

FIGURE A-1. **Food and Water Risk Assessment Checklist – Continued**

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

Describe SR:

Mitigation for SR:

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

Affected Product Exclusions (if not mitigated):
○ None

Reason for Exclusion:

FIGURE A-1. **Food and Water Risk Assessment Checklist – Continued**

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

Describe SR:

Mitigation for SR:

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

Affected Product Exclusions (if not mitigated):
○ None

Reason for Exclusion:

(continue on blank page if necessary)

FIGURE A-2. **Food and Water Risk Assessment Checklist – Continued**

STEP-III REMARKS *(Remarks are optional for Administrative items, items rated Moderate, and items of excellence)*	
<u>Administrative</u>: **<u>The following Moderate (Initial) Risk items are of additional concern:</u>** **<u>Items of Excellence</u>:** *(continue on blank page if necessary)*	
Operational Commander/Representative	**Risk Assessor**
Name/Rank: **Phone:** **Email:**	**Name/Rank:** **Phone:** **Email:** **Signature:**

FIGURE A-2. **Food and Water Risk Assessment Checklist – Continued**

CONCLUDING MATERIAL

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

Preparing Activity:
Army - MD2
Project No. 89GP-2011-001

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