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MILITARY STANDARD

GUIDELINES FOR DETECTION, EVALUATION, AND PREVENTION OF PEST INFESTATION OF SUBSISTENCE

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DEPARTMENT OF DEFENSE

WASHINGTON, DC 20310

Guidelines for Detection, Evaluation, and Prevention of Pest Infestation of Subsistence

MIL-STD-904A

1. This Military Standard is approved for us by all Departments and Agencies of the Department of Defense.

2. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to:

Commandant, Academy of Health Sciences, US Army, ATTN: HSHA-IVS, Fort Sam Houston, TX 78234, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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1.1 Purpose. Purchasing agencies within the Department of Defense strive to purchase the highest quality subsistence available, but because of the world-wide mission and the severe conditions that some subsistence must withstand, food pest problems are inherent. This standard establishes actions to be taken for subsistence that has been discovered to be infested or contaminated by insects, rodents, birds, or other animals before or after final acceptance by an element of the Department of Defense. It provides a list of inspection and insect collection equipment, references, inspection procedures, sampling techniques, and insect collecting procedures.

1.2 Application. This standard is applicable to all elements within the Department of Defense involved in the inspection of subsistence items purchased with either appropriated or nonappropriated funds.

1.3 Objective. This standard is intended to furnish guidance in detection, evaluation, and prevention of infestation/contamination of subsistence from insects, rodents, birds, and other animals.

1.4 Limitations. This standard will not be used to determine the capability of an establishment to produce or furnish products or services which are in compliance with specifications or other purchase documents.

2 REFERENCED DOCUMENTS

2.1 Issue of documents. The following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of this standard to the extent specified herein:

MILITARY STANDARDS

MIL-STD-1486, In-Transit Fumigation

(Copies of this standard for Military use may be requisitioned on DD Form 1425, Specification and Standard Requisition, and submitted to Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Ave, Philadelphia, PA 19120. The title and identifying symbol should be stipulated).

OTHER MILITARY PUBLICATIONS

DOD 4145.19-R-1, Storage and Materials Handling

AR 40-656, Veterinary Service Surveillance Inspection of Semiperishable and Perishable Foods

AR 40-657/AFR 163-2/NAVSUPINST 4355.4/MCOP 10110.31, Medical Services Veterinary Food Inspection

HQDA Cir 30-83-3, Fumigation of the Meal, Ready-to-Eat (MRE) Rations

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Technical Information Memorandum No. 11, Hydrogen Phosphide Fumigation with Aluminum Phosphide

(Copies may be obtained from the Armed Forces Pest Management Board, Forest Glen Section, Walter Reed Army Medical Center, Washington, DC 20012).

Defense Personnel Support Center Subsistence Inspection Manual (DPSC M) 4155.6, Subsection 218.1, entitled Destination Inspection

Defense Personnel Support Center Subsistence Inspection Manual (DPSC M) 4155.6, Subsection 218.2, entitled Destination (Surveillance) Inspection, Entomological Laboratory Identification Services

(Copies may be obtained from Headquarters, Defense Personnel Support Center, ATTN: DPSC-STK, 2800 South 20th Street, Philadelphia, PA 19101).

Navy-Wide Shipboard Pest Control Manual

(Copies may be obtained from Navy Disease Vector Ecology and Control Center, Naval Air Station, Jacksonville, FL 32212 or DVECC, Alameda, CA 94501).

AF/LEE ltr, 18 May 1982, SUBJECT: Air Force Stored Product Pest Management Program
(Copies may be obtained from HQ, AFESC/DEVN, Tyndall AFB, FL 32403).

3. DEFINITIONS

3.1 Contamination. The act or process of exposing a product to an adulterant or unwholesome material whether it be food pests, parts thereof, or their filth.

3.2 Dermestid. Any beetle belonging to the family Dermestidae.

3.3 Entomologist. An individual with a bachelor's or higher degree in entomology (the science of dealing with insects and related pests) who is employed or contracted by the Department of Defense (as a military officer or civilian) or a Federal/State Agency.

3.4 Government-owned subsistence. Subsistence owned by either appropriated or nonappropriated Department of Defense activities/instrumentalities.

3.5 Infestation. The presence of insects, rodents, birds, other animals or parts thereof, and/or their wastes in or around subsistence such that the subsistence may be rendered unwholesome for human consumption.

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3.6 Infestible subsistence. Subsistence items whose nature and method of packaging make them subject to actual or potential pest infestation (See Appendix A).

3.7 Insect. All life stages of small invertebrate arthropods belonging to the class Insecta that may be found infesting subsistence.

3.8 Insect free. No insects, alive, dead, or parts, thereof, able to be seen during inspection of the subsistence.

3.9 Package, primary or unit. One unit of a product, uniformly processed, wrapped, or sealed in a container.

3.10 Package, intermediate. A package which contains two or more packaged items and itself, is enclosed as part of a larger package.

3.11 Packaging. Refers to unit container/package.

3.12 Packing. Refers to shipping container.

3.13 Pest. Any insect, rodent, bird, or other animal that may render subsistence partially or wholly unusable through infestation or contamination.

3.14 Pest control personnel. Military or civilian personnel trained and certified or licensed to use or supply pesticide chemicals.

3.15 Warranty action. Administrative steps taken by the responsible contracting officer to recover losses from a contractor for subsistence products which show evidence of infestation or contamination prior to government acceptance.

3.16 Wood's light. A handheld ultraviolet light used to detect certain substances by virtue of their fluorescing properties, e.g., rodent urine. Since many substances fluoresce, this test should only be used for presumptive evidence.

4. GENERAL REQUIREMENTS

4.1 General guidelines. The following general guidelines are established.

4.1.1 Infestation/contamination of contractor-owned subsistence. Whenever any pest infestation or contamination is detected upon receipt of subsistence from a commercial source, the shipment shall be rejected. However, when medical/Veterinary Service inspection personnel determine the infestation/contamination has not violated the packaging of the product and if the infestation/contamination is minimal, the appropriate accountable officer, with the concurrence of the medical/veterinary authority may accept the shipment based on two criteria; (1) There is an immediate urgent need for this particular shipment which cannot be met if the delivery is rejected, and (2) if food pest insects were found, that the subsistence be fumigated at the contractor's expense prior to unloading or placement in the warehouse. When contamination is detected on packing, the shipment may be accepted if the package or intermediate package may be removed in an uncontamined condition. If the unit package is also contamined, it may be accepted only if decontamination of

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packaging is possible. This also must be done at the contractor's expense and prior approval of the contractor's proposed decontamination method must be obtained from the medical/Veterinary Service officer.

4.1.2 Infestation/contamination of government-owned subsistence. If within six months of receipt an infestation/contamination is determined to have existed in the subsistence at the time of receipt, the accountable officer will be informed so that warranty action may be initiated and immediate arrangements made with the contractor for disposition of the subsistence. If infestation/contamination of government-owned (appropriated/nonappropriated) subsistence has occurred after receipt, the guidelines in the following paragraphs will apply.

4.1.2.1 Insect infestation.

a. When an infestation is found to include living or dead larval stages of an insect species belonging to the genus *Trogoderma* or other dermestids, one insect within the product itself (not external) shall be justification for the condemnation of the lot.

b. When an infestation is found to involve living or dead insect species belonging to the genus *Tribolium*, an average of three insects or more per pound within the packages inspected shall be justification for the condemnation of that lot.

c. When an infestation is found to involve insects other than those belonging to the genus *Trogoderma* (or other dermestids) or *Tribolium*, an average of seven or more living or dead insects per pound of product, in the lot being inspected, shall be justification for condemnation of that lot.

d. If the insects were found by the medical/Veterinary Service officers to be in a safe range, after fumigation or freezing, the accountable officer may utilize the product, if necessary, after the provisions of paragraph 5.5.3 have been followed. There may be circumstances when infested subsistence that have been declared to be safe by medical/veterinary inspectors can be used for issue or resale by the accountable officer. These decisions must be mutually agreed to by the medical authority and the accountable officer and the subject subsistence must present no health threat to the consumer. Infested subsistence, whether in depots or in installations, will not be shipped to another potential user. If not used locally, infested subsistence shall be destroyed.

4.1.2.2 Rodent contamination.

a. Any evidence of rodent contamination found within product packaging shall be cause for condemnation of those units of product.

b. Contamination of products by penetration of packaging with rodent feces/urine as evidenced by visible urine stains and/or feces, a positive Wood's light test, or one or more holes gnawed through the innermost layer of packaging shall be cause for condemnation of those units of product.

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c. Products packaged in waterproof containers (e.g., cans) that have been externally contaminated by rodents may be recouped provided they are disinfected and rinsed under the direction of the medical/Veterinary Service officers. If the contamination is believed to have occurred before acceptance by the government, the appropriate contracting officer should be advised, so that warranty action can be initiated.

4.1.2.3 Bird contamination. Any unit of product that has been contaminated by bird parts/excreta shall be condemned unless the package has not been penetrated and can be cleaned and disinfected or repackaged.

4.1.2.4 Miscellaneous animal contamination. Contamination by animals such as dogs, cats, racoons, or any other animal shall be handled on an individual basis. Normally, only a small amount of product is involved and that product can be salvaged if the product package has not been contaminated by feces and/or urine or penetrated by teeth and/or claws. The appropriate medical/Veterinary Service officer must make these wholesomeness determinations due to the public health implications.

5. DETAILED REQUIREMENTS

5.1 Equipment. The following equipment is recommended for pest surveillance by inspection personnel. Local supply personnel may be able to provide assistance in obtaining this or similar equipment.

a. A well-lighted (minimum 100 foot candle at work surface) workbench with 3 feet by 6 feet of readily cleanable working surface (free of cracks and crevices).

b. White or light colored disposable paper in rolls at least 3 feet wide.

c. Flashlight, right angle (NSN 6230-00-264-8261) or any portable high intensity light source.

d. Magnifier, (Reading Glass) (NSN 6650-00-252-6250).

e. Small brush to transfer insects (NSN 8020-00-503-0000).

f. Seventy percent alcohol (ethyl or methyl preferred) to kill and preserve the insects.

g. Screw cap vials, 9 ml (NSN 6640-00-408-2200) or 3 ml (NSN 6640-00-408-2300).

h. Paperboard shipping container (NSN 8115-00-511-5750).

i. Sieves - available through scientific products companies.

(1) For powdery products (flour, etc.) use US Standard Sieve Series

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Nos. 20, 30, 40, 50. The size of the sieve mesh should be large enough to allow the product to pass through while retaining the insects on the mesh.

(2) For granular products (meals, etc) use US Standard Sieve Series Nos. 10, 20.

(3) For bulk products (spaghetti, etc) use US Standard Sieve Series No. 5 and a ½ inch sieve. The product should be retained on the mesh while allowing the insects to fall through.

j. Knife to open sample bags.

k. Tape to reseal sample bags that are larger than 10 pounds.

l. Ultra-violet light, specimen examining (NSN 6530-00-663-2140) (Wood's Light). 45 volt battery - 2 needed (NSN 6135-00-100-0464).

m. Balance, trip, 2000 gram capacity (NSN 6670-00-401-7195). Weight set, balance, 100 gram to 1000 gram (NSN 6670-00-401-8830).

5.2 Inspection procedures.

5.2.1 Sampling. Since most subsistence items are susceptible to infestation or damage by food pests, inspections of subsistence items listed in Appendix A should be performed before off-loading at arrival, before being reshipped, and during predetermined intervals while in storage. Sample size will be in accordance with DLAM 4155.5, Appendix S; DPSCM 4155.6, Subsection 218.1; or AR 40-656 as applicable. The samples should be taken from areas most likely to be infested/contamined. The most likely areas would be the outermost containers on the top and bottom of the stacks or the areas closest to an established problem area. If the product being inspected has a history of frequent infestation/contaminations, or has been stored near infested/contaminated products, additional samples should be inspected. If insects or other subsistence pest problems are discovered or suspected, an open-package inspection must be performed; to ascertain if an infestation/contamination does exist; to determine the number of insects per pound inspected; and to obtain samples for laboratory identification.

5.2.1.1 Open-package inspection units 10 lbs or less. For sample units containing 10 lbs or less of product, use the entire contents of an individual package as the sample.

5.2.1.2 Open-package inspection units greater than 10 lbs. For sample units containing more than 10 lbs of product a 3 lb sample will be taken in a sanitary manner from each of the following locations.

a. Top of the unit next to the opening.

b. Bottom of unit next to the seal or seam.

c. Middle of unit or if tears or holes are observed, adjacent to the tears or holes.

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After removal of sample material all container openings must be sealed tightly with tape to avoid spillage or contamination. The container will be identified with a legible DOD surveillance or CIA (as applicable) inspection stamp impression, and the amount of product removed will be indicated.

5.2.2 Closed-package and packing examination. All seams, tucks, and open areas of all samples will be examined for the presence of insects using a portable high illumination light source. Additionally, the samples will be scrutinized for small insect penetration holes and rodent, bird, or animal contamination/damage.

5.2.3 Open-package examination. When an open-package examination of a product is determined to be necessary, the sample is brought to the inspection table. The correct amount of sample should be approximated by utilizing an appropriate scale and container. The sample is then screened for insects in one of two different methods: (1) By thinly spreading out the sample on the examination table covered with light colored disposable paper, or by (2) shaking the product through the proper sieve, or in the case of pasta or certain cereal products, shaking the insects through the larger hole size sieve. Using either screening method and a high intensity light source, isolate any live or dead insects using forceps or a brush dipped in alcohol. Pick up immature or adult insects other than moths with the brush or forceps and put into a screw-top vial filled with alcohol. Adult moths and any other suspected contaminant may be put, without alcohol, into the smallest size screw top container, pill box, or petri dish available to contain the specimen. Tissue paper should be used to protect the dry specimens. All containers sent to a laboratory must be submitted IAW paragraph 5.5.1 and be properly labeled with the sample number.

5.3 Subsistence inspection for infestation/contamination. The importance of detecting infestation/contamination cannot be overemphasized. Subsistence supplies will be inspected at all stages in the food distribution system in accordance with AR 40-657/AFR 163-2/NAVSUPINST 4355.4/MCOP 10110.31.

5.3.1 Procurement inspections for infestation/contamination. Procurement inspections of subsistence are performed on delivery at purchase (class 4) and purchase by nonappropriated fund activities (class 8). If subsistence items are found to be infested/contaminated the shipment is normally rejected. However, if the inspection reveals only a light infestation of the delivery vehicle or container surface (no insects in the product), the appropriate accountable officer should be contacted for specific instructions. The subsistence can be fumigated in the delivery vehicle at contractor expense and concurrence, and then placed in an isolation area which has been treated with an insecticide. The subsistence item shall be inspected as soon as possible and always before being placed in the normal storage area.

5.3.2 Surveillance inspections for infestation/contamination. Surveillance inspections are performed on government-owned foods to determine suitability for further storage, shipment, issue, sale, and/or consumption.

5.3.2.1 Any receipt except purchase (class 5). During this inspection the conveyance and the subsistence must be closely inspected to detect infestation/contamination that may have arisen from the conveyance or from undetected subsistence infestations becoming active during transport. Subsistence shipped long distances to or from tropical climates should receive a thorough inspection.

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During warm periods of the year infestible subsistence will be fumigated in railcars while in-transit (MIL-STD-1486 gives guidance on in-transit fumigation procedures). Upon arrival of fumigated conveyances, the receiving officer will notify pest control personnel who will insure that the conveyance has been properly detoxified prior to unloading.

5.3.2.2 Prior to shipment (class 6). Government-owned subsistence, that is to be shipped, has already been inspected when it was received and during storage; therefore, it is often not closely inspected prior to reshipment. The conveyance must be thoroughly inspected, especially if there will be no in-transit fumigation. Guidance for naval vessels, which present special problems, can be found in the Navy-Wide Shipboard Pest Control Manual.

5.3.2.3 At issue or sale (Class 7). Infestation/contamination is often discovered at the time of sale or issue because the subsistence items are usually handled individually rather than by the case or pallet. A detected problem should set up a chain of events to include finding the source and the extent of infestation/contamination, reporting the infestation/contamination to the proper authorities, segregation of the infested/contaminated items, identification and control of the pest, and disposition of affected items. Additional stock in the warehouse and any adjacent infestible subsistence should be checked as well as stock at other locations in the supply system.

5.3.2.4 During storage (class 9). The following guidelines should be followed when performing cyclic inspections for infestation/contamination of infestible subsistence items in storage (giving special attention to the subsistence items listed in Appendix A).

a. If any insect infestation has occurred during the previous 60 days in the subsistence storage area(s), the cyclic inspection rate will be monthly.

b. If no insect infestation has occurred during the previous 60 days in the subsistence storage area(s), the cyclic inspection rate will be every three months.

5.4 Inspection of storage areas for pest problems. Detailed inspections of storage areas should be done jointly by medical/Veterinary Service personnel and entomology/Prevention Medicine personnel as often as necessary, but at least semiannually, to identify and control pest problems in subsistence storage areas. Routine walk-through surveillance inspections of subsistence storage areas should be done by medical/Veterinary Service personnel at least on monthly intervals. No formal inspection reports are required for the routine walk-through surveillance inspections when inspection results are negative; however, a log of inspections should be maintained. These inspection frequencies can be increased, if needed, but should never be decreased. DOD 4145.19-R-1, Storage and Materials Handling, Section 4, Pest Management gives guidelines to successfully maintain an effective stored products pest program.

5.4.1 Inspection for insects. Most insects have a very high reproductive potential and a relatively short life cycle which permits an infestation to develop with a short period of time. Each new shipment of infestible subsistence items should be suspect even though there is an apparent absence of

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insects. An infestation can develop in less than 30 days from one insect per pound to hundreds, which will require the item to be destroyed. Warehouse windows should be checked for flying insects, and the floors, walls, and pallets should be examined for insects that have emerged from subsistence items. Insect traps should be utilized in the surveillance program where practical. Sacked and boxed farinaceous items should be checked around the end seals and stitching. Rodent bait boxes should not be overlooked as the grain-based baits are often found to be infested. A good flashlight is indispensable for finding insects in these locations. If insects are discovered, specimens will be collected and prepared IAW paragraph 5.5.1. If certain types of subsistence items are frequently infested, samples may be taken and incubated at higher temperatures in order to speed insect development and early detection.

5.4.2 Inspection for rodents. Rodents are rarely seen except in heavy infestations; therefore, it is necessary to properly interpret signs that indicate their presence. Continually monitor for signs such as droppings (type and age), runways (along walls, steps, and rafters), rubmarks (fresh or aged), burrows (fresh or old), gnawing (recent or weathered), and tracks (sharp and distinct or covered with dust). Proper warehousing procedures along with rodent surveillance and control greatly decrease damage caused by rodents.

5.4.3 Inspection for birds. Birds contaminate stored supplies when they enter the storage area to feed on spilled foods or to obtain shelter. Even if birds are not seen the topmost stacks of subsistence should be inspected for bird droppings. Warehouse personnel are also good sources of information pertaining to the location and problems caused by birds in the storage areas.

5.4.4 Inspection for other animals. Indications of other animals in a subsistence warehouse include finding droppings, hair, damaged products, or seeing the animal(s). The animal(s) must be located and removed by the appropriate animal control activity. The building should be examined for possible animal entrances which must be sealed to preclude further incidences.

5.5 Procedures following detection of infestation/contamination of government-owned subsistence. When infested/contaminated government-owned subsistence is detected the procedures in the following paragraphs are a standard sequence of events. (Shipboard infestations/contaminations are handled differently because subsistence fumigation is not authorized). However, freezing infested subsistence at $0^{o}F$ for a minimum of two weeks, which kills the insects and their eggs, is an acceptable alternative to fumigation. If the insect levels exceed those recommended in paragraph 4.1.2.1 or if the appropriate authority elects not to recoup the infested subsistence, then immediate disposition must be made to prevent further spread of the problem).

5.5.1 Sample submission. All insect infestations must be identified, controlled, and reported to enable DOD to accurately assess and manage stored subsistence losses (See AR 40-658, Part IIIc). Inspectors will submit a typed or printed DD Form 1222, Request for and Results of Tests, and insect specimens to the installation or laboratory entomologist providing identification services. DPSCM 4155.6, Subsection 218.1, provides a list of entomological laboratories in CONUS and overseas. (Air Force personnel will continue to follow sample submittal guidance provided in Appendices 1 and 2 of the Air Force Stored

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Products Pest Management Program - AF/LEE ltr, 18 May 1982). The activity preparing DD Form 1222 will complete Section A, retain a file copy and forward the original and remaining copies to the identifying entomologist. After identification of the insects, the entomologist will complete Section B, and return the original and four copies to the submitting activity. One copy will also be sent to DPSC if the subsistence was purchased by DPSC; to the Army and Air Force Exchange Service if the subsistence was purchased by AAFES; or to the appropriate accountable officer if the subsistence was purchased by other than the above. The entomologist will retain the last copy and the insect specimens for a minimum of one year. Retention of identified specimens is necessitated by their possible future use in warranty actions. A sample form and instruction sheet for completing DD Form 1222 are at Appendix B.

5.5.2 Fumigation. Infested subsistence that is not immediately destroyed, frozen, or removed will be promptly fumigated. Fumigation will be conducted by local pest control personnel in strict accordance with the Armed Forces Pest Management Board (AFPMB) Technical Information Memorandum No. 11, Hydrogen Phosphide Fumigation with Aluminum Phosphide. When fumigation of Meal, Ready-to-Eat rations is required, considerable, additional aeration time is required before movement or consumption. Headquarters, Department of the Army Circular 30-83-3, Fumigation of the Meal, Ready-to-Eat (MRE) rations gives the proper guidance.

5.5.2.1 Procedures after fumigation. Once the fumigated subsistence is aerated and the area declared safe by certified pest control personnel, the effectiveness of the fumigation and the fitness of the subsistence item for consumption must be determined. Sample packages selected for inspection will be representative of the lot. The amount recommended below will provide a statistically sound estimate of the final degree of infestation so that a proper disposition recommendation can be made.

Lot Size (Primary Container)	Sample Size
2 to 15	2
16 to 50	3
51 to 150	5
151 to 500	8
501 to 3200	13
3201 to 35000	20
35001 to 500000	32
500001 and over	50

5.5.3 Disposition. After the infesting insect has been identifed, the guidelines of paragraph 4.1.2.1 shall be followed. If the subsistence item exceeds the guidelines, appropriate disposition should be recommended. If inspection reveals the product is within safe tolerances after it has been

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fumigated or held at $0^{o}F$ for a minimum of two weeks, a recommendation shall be made by medical/Veterinary Service personnel to the accountable officer that the product may be issued or sold (refer to paragraph 4.1.2.1d). The exterior of the troop issue shipping containers and that of individual unit of issue containers for sale in commissaries/exchanges shall be marked in the following manner so that the final users may be aware of the products' condition.

> "This product has been found to contain a few insects which were killed by fumigation or freezing. Medical/Veterinary Service personnel have examined this product and having found it to be within approved health standards (MIL-STD-904A) have declared it fit for human consumption. Recommend the product be sifted before use."

5.6 Control procedures. The following basic control procedures will decrease the incidence and severity of problems associated with pest infestation of subsistence.

5.6.1 Inspection. Early detection of pest infestation is of paramount importance. Cooperation and rapid communication between medical and procurement/receiving personnel plays a key role in having an effective pest management program.

5.6.2 Sanitation. Sanitation is the single most important factor in preventing and controlling food pests. Spilled items should be cleaned up immediately and damaged containers disposed of or repaired. Floors should be swept daily and all shelving and equipment should be cleaned frequently and routinely especially in the more inaccessible areas where pests are more likely to hide. Routine sanitary inspections are a valuable tool not only to assure proper cleanliness, but to detect early pest problems so that they may be quickly controlled before significant damage occurs.

5.6.3 Warehousing. Subsistence items shall be stored off of the floor on pallets and/or shelves. The pallets and shelves shall be set out from the walls far enough to allow access for cleaning and inspections and to reduce harborages. Subsistence shall not be stacked so that crushing occurs as this increases the chance of pest problems. Subsistence items shall be rotated to prevent insects from completing enough life cycles to allow a light infestation to develop into a heavy damaging one. New stocks of susceptible subsistence items shall be isolated from old stocks to prevent cross infestations. Bagged animal foods, because of their frequency of infestations, shall always be stored in an area separate from other subsistence items.

5.6.4 Pest proofing. All military subsistence storage facilities should be constructed so that rodent, insect, and bird entry and harborage are minimized. All exterior openings larger than ¼ inch shall be sealed or covered with cement, 26 gauge or thicker sheet metal, ¼ inch hardware cloth, or other suitable materials. Structural harborages such as double walls, spaces between floors, ceilings, and boxed-in pipes or beams shall be eliminated or completely sealed.

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5.6.5 Chemical pest control. The use of chemicals will continue to constitute a large portion of pest control operations either as semi-permanent measures (such as residual insecticides, rodenticides, and bird poisons) or very temporary aids (such as repellants, fumigants, and fogs).

5.7 Entomological references. The references listed below are suggested for use by personnel involved in the inspection of subsistence. These references are for information only and should not be used as a substitute for qualified entomolgical guidance.

1. The Basic Principles of Insect Population Suppression and Management, Agriculture Handbook No. 512, 1979, 659 pages, illus, stock #001-000-03702-2, (Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402).

2. Control of Domestic Rats and Mice, 1979, 47 pages, HHS Publication No. (CDC) 80-8141, (U.S. Department of Health and Human Services, Public Health Service, Center for Disease Control, Atlanta, GA 30333).

3. Handbook on Bird Management and Control, 1980, 176 pages, (AFESC-TR-80-1, Directorate of Environmental Planning, Air Force Engineering and Services Center, Tyndall Air Force Base, FL 32403).

4. Household and Stored Food Insects of Public Health Importance and Their Control. HHS Publication (CDC) 75-8122, (U.S. Department of Health and Human Services, Public Health Service, Center for Disease Control, Atlanta, GA 30333).

5. Principles of Food Analysis for Filth, Decomposition, and Foreign Matter, 1981, HHS Publication (FDA) 80-2128. (U.S. Department of Health and Human Services, Public Health Service, Food and Drug Administration, Washington, DC 20402.

6. Principal Storage Pests. A foldout guide showing 24 insects in color with stages of development and short description of each (Degesch America, Inc., P.O. Box 116, 275 Triangle Dr., Weyers Cave, VA 24486).

7. Stored Grain Insects. Agriculture Handbook No. 500, 1979, 57 pages, illus, stock #001-000-03933-4, (Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402).

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Custodians:

Army - GL

Navy - SA

Air Force -45

Review activities:

Army - MD

Navy - MS, MC

DP - SS

Preparing Activity:

Army - GL

Project No. 89GP - 0104

Copies of this standard for military use may be requisitioned on DD Form 1425 (Specification and Standard Requisition) and submitted to Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, Pennsylvania 19120. The title and identifying symbol should be stipulated when requesting copies of military standards.

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APPENDIX A

COMMONLY INFESTED SUBSISTENCE

NOTE: The following items have a high potential for infestation. Items packaged in glass or cans are not susceptible to infestation except for infestations existing at the time of packaging:

Operational rations (not packaged in cans)
Dry pet food (to include bird seed & laboratory animal food)
Flour
Pasta products (macaroni, spaghetti, noodles, & vermicelli)
Grains (cornmeal, grits, rice, barley, rolled oats, wheat base, popcorn, farina, and corn starch)
Spices
Dry beans & peas
Prepared breakfast cereals (corn flakes, bran, etc)
Bakery & fry mixes
Cookies & crackers
Dried fruits
Nuts
Cocoa & cocoa beverages powder
Dry milk
Candy
Dehydrated soups, vegetables & gravy mixes
Tobacco products
Yeast food
Grated cheese
Powdered dairy drinks
Confectioneries
Coffee
Tea
Prepared coconut

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APPENDIX B

INSTRUCTION SHEET FOR DD FORM 1222

BLOCK NO. SECTION A (Completed by activity submitting specimens for identification)

1. Laboratory or Entomologist to which specimens are being submitted.
2. Name and address of submitting activity, and telephone number (where mail and messages are normally received). Also enter veterinary activity code number.
3. Complete name and address of contractor, and contract no. (as stated in contract).
4. Manufacturing plant, if different from Block 3. If identical, state, "same as Block 3."
5. Complete nomenclature of end item as stated in contract, with NSN if listed.
6. Assign sample numbers consecutively for all samples submitted to the laboratory during this calendar year, preceeding each sample number with veterinary activity code number.
7. Contractor's lot number.
8. Enter "Insect Identification."
9. Date specimens are shipped for identification.
10. Mark out "TESTED," and add "IDENTIFIED." Enter "Insects" in block.

10a. Number and type of containers holding insects. Example, "2 vials," "1 box," "1 bottle."

11. Number pounds of product involved, if known. If the medical authority has put a product on medical hold, enter total amount on hold.
12. Enter "DLAM 4155.5, App 2," or other appropriate reference.
13. Name and address of supplier, or "Same as Block 3," if applicable. In parentheses, state the immediate source of the product. Example, ("DLA Depot, Memphis, TN").
14. Means of specimen transmittal. (Surface mail, Air mail, Hand-carried, Express).
15. Inspector's name, grade, and signature, and date sample was collected.
16. Enter any necessary clarification of entries made in this request. As a minimum:

    a. Exact location insects were found. Examples, "inside sealed packages," "crawling on shelf near product," "on outside of bag, near small penetration holes."

    b. Request immediate telephonic notification of identification. Insure correct telephone number is in Block 2.

    c. Point of contact at your activity. Two or three names if possible.

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MIL-STD-904A

17. Enter, same as Block 2, and copy to: (if purchased by DPSC), DPSC, ATTN: DPSC, STQX (Med Entomol), 2800 20th St., Philadelphia, PA 19101; HQ, AAFES, ATTN: Staff Veterinarian, Dallas, TX 75222 (if purchased by AAFES); or the appropriate accountable officer (if purchased by other than DPSC or AAFES).

BLOCK NO. SECTION B. (Completed by laboratory or activity providing identification)

1., 2., 3. Self-explanatory

4. State how identification was made (usually "microscropic identification"), List number of specimens used in identification, scientific name(s), and stage of development. Common name may also be included. When species is uncertain, identify to genus. Pertinent comments may be included.

SECTION B must be signed by an entomologist. If listed in the American Registry of Professional Entomologist, indicate by adding, "R.P.E." after typed name.

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REQUEST FOR AND RESULTS OF TESTS

PAGE NO. 1 | NO. OF PAGES 1

SECTION A - REQUEST FOR TEST

1. TO: (Include ZIP Code)
USAEHA Regional Division, South
ATTN: Radn and Ento Sciences
Fort McPherson, GA 30330

2. FROM: (Include ZIP Code)
SP5 James J. Smith #1320
Food Inspection Branch
Veterinary Activity
Fort Jackson, SC 29207
AUTOVON 396-1234/5.

3. PRIME CONTRACTOR AND ADDRESS (Include ZIP Code)
Paddyland Rice Corp
123 East Avenue
Atlanta, GA 30333

CONTRACT NUMBER

4. MANUFACTURING PLANT NAME AND ADDRESS (Include ZIP Code)
Same as Block 3

P. O. NUMBER

5. END ITEM AND/OR PROJECT	6. SAMPLE NUMBER	7. LOT NO	8. REASON FOR SUBMITTAL	9. DATE SUBMITTED
Rice, bleached, enriched (5 lb bag) NSN 1234-00-456-7890	1300-22	56	Insect Identification	3 Dec 83

10. MATERIAL TO BE TESTED	10a. QUANTITY SUBMITTED	11. QUANTITY REPRESENTED	12. SPEC. & AMEND. AND/OR DRAWING NO. & REV. FOR SAMPLE & DATE
Insects	2 vials (#1, #2)	2400 lbs (on Med Hold)	DLAM 4155.5, App S

13. PURCHASED FROM OR SOURCE	14. SHIPMENT METHOD	15. DATE SAMPLED AND SUBMITTED BY
(DLA Depot, Memphis, TN) Same as Block 3	Surface mail	CPT John J. Jones, VC, 2 Dec 83 John J. Jones

16. REMARKS AND/OR SPECIAL INSTRUCTIONS AND/OR WAIVERS

a. Insects in vial #1 were inside packaged product, but no penetration holes or other visible means of entry into the package were found. Insects in vial #2 were crawling inside cardboard shipping carton, and on shelf near product.

b. Request immediate telephonic notification of identification to AUTOVON 396-1234/5.

c. Points of contact: CPT J. Jones, SP5 J. Smith, PFC B. Andrews.

17. SEND REPORT OF TEST TO

[redacted]
Philadelphia, PA 19101.

SECTION B - RESULTS OF TEST (Continue on plain white paper if more space is required)

1. DATE SAMPLE RECEIVED	2. DATE RESULTS REPORTED	3. LAB REPORT NUMBER
6 Dec 83	7 Dec 83	E-12-345

4. TEST PERFORMED — RESULTS OF TEST — SAMPLE RESULT — REQUIREMENTS

Microscopic identification:

Vial #1: a. Tribolium confusum (confused flour beetle)
6 larvae, 12 adults

b. Oryzaephilus surinamensis (saw-toothed grain beetle)
5 adults

Vial #2: Trogoderma sp. (Dermestid beetle)
4 larvae

NOTE: Presence of 2 species (Vial #1) in the same visible-sealed package may indicate that infestation occurred during manufacturing, and warrants further inspection. Tribolium in Vial #1, and Trogoderma in Vial #2 have special condemnation levels.

DATE	TYPED NAME AND TITLE OF PERSON CONDUCTING TEST	SIGNATURE
7 Dec 83	THOMAS T. THOMPSON, R.P.E. CPT, MSC Medical Entomologist 68G	Thomas T Thompson

DD FORM 1 FEB 62 1222 REPLACES DD FORM 1222, 1 JUL 58, WHICH IS OBSOLETE.

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INSTRUCTIONS: In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edge *(DO NOT STAPLE)*, and mailed. In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered.

NOTE: This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

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STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions – Reverse Side)

1. DOCUMENT NUMBER

2. DOCUMENT TITLE

3a. NAME OF SUBMITTING ORGANIZATION

b. ADDRESS *(Street, City, State, ZIP Code)*

4. TYPE OF ORGANIZATION *(Mark one)*

- ☐ VENDOR
- ☐ USER
- ☐ MANUFACTURER
- ☐ OTHER *(Specify)*: _____

5. PROBLEM AREAS

a. Paragraph Number and Wording

b. Recommended Wording:

c. Reason/Rationale for Recommendation

6. REMARKS

7a. NAME OF SUBMITTER *(Last, First, MI)* – Optional

b. WORK TELEPHONE NUMBER *(Include Area Code)* – Optional

c. MAILING ADDRESS *(Street, City, State, ZIP Code)* – Optional

8. DATE OF SUBMISSION *(YYMMDD)*

DD FORM 82 MAR 1426

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