

TECHNICAL GUIDE
FOR
INSTALLATION PEST MANAGEMENT COORDINATORS
2007

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INTRODUCTION

The Installation Pest Management Coordinator (IPMC) is the administrative lead for the pest management program and is responsible for maintaining the Integrated Pest Management Plan. The IPMC plays a pivotal role on the installation as the gate keeper for pesticide security and the pest control mission. The bottom line for the installation's pest management program is to provide our Soldiers and their families with a safe and effective program that eliminates diseases transmitted by pests, protects military property, and ensures troop training capability while minimizing the reliance on pesticide use.

As the Army restructures its base operating functions to meet 21st Century military strategies, so will installation pest management programs be affected in such ways as funding and changes to operations. Army Family Housing is being privatized, and in-house work forces are being reviewed and are often being replaced by commercial contracts and, to a lesser extent, the use of purchase cards to procure limited pest control services. These evolving operational changes will continue to impact Army pest management policies and the way we conduct business.

In general, the size, population and mission of the installation will define your pest management program requirements. Specific responsibilities for IPMCs are influenced by installation demographics, but to a larger extent rely on the actual job description and your day to day involvement with the pest control operation. Depending on your job description and involvement, being the IPMC can be a full-time job or one of your "other duties as assigned". How much time you spend as the IPMC and on other pest management duties will determine the level of training that you will need to satisfactorily perform all your duties. Having prior pest management training and experience is important, especially if your duties also include handling pesticides on a routine basis. If you, as the IPMC, do not have prior pest management training or experience, you need training to become knowledgeable of the basic principles of Integrated Pest Management (IPM) and acquire core knowledge about pesticides and state and federal regulations.

This guide will provide you with current information and guidance to effectively manage your installation's pest management program. It will also help you to define organizational pest management responsibilities at the installation, including health and safety, environmental considerations, and pest surveillance and control. In addition, this guide will discuss important program elements, such as reporting and record keeping, integrated pest management (IPM), the self-help program, contracting and other essential program requirements.

CHAPTER 1

INSTALLATION PEST MANAGEMENT PROGRAM

1.1 Installation Management Command (IMCOM). The IMCOM is responsible for funding the infrastructure of Army installations to include public works functions, such as the pest management program. Funding for installation pest control includes, but is not limited to, equipment and pesticide procurement, salaries, pesticide applicator training for DoD employees, certain pest control contracting, and routine pest control operations. The role of the IMCOM is to provide funding and resources for the program. The DoD-certified pest management consultants at the U.S. Army Environmental Command centrally manage the pest management program for IMCOM in CONUS, to include the Pacific as well as the Army Reserves. Europe and Korea have their own pest management consultants, as does the U.S. Army National Guard. Additional information on the IMCOM and its responsibilities can be found at <http://www.imcom.army.mil/site/command/>.

1.2 The U.S. Army Environmental Command (USAEC). USAEC provides Army centralized pest management oversight and technical support to IMCOM installations in CONUS and the Pacific installations (except Europe and Korea), the U.S. Army Reserves, and also other special installations not currently under IMCOM. Pest management consultant oversight and technical support is provided by the USAEC designated pest management consultants, and includes validation of Integrated Pest Management Plans, pest management program assistance visits (PMPAVs), approval of pest control contracts, certification of DoD pesticide applicators, pesticide use approvals, and regulatory guidance on pest management policy and operational issues. USAEC, or your designated pest management consultant, is your first stop for pest management consultant oversight and technical assistance with respect to your installation pest management program and operational needs. If you have questions about this guide, or require further information, you should contact USAEC. For more information on USAEC's pest management program, or for assistance, go to the USAEC Web site at <http://aec.army.mil/usaec/pest/index.html>.

1.3 The Armed Forces Pest Management Board (AFPMB). The AFPMB recommends policy, provides guidance, and coordinates the exchange of information on all matters related to pest management throughout the DoD. The AFPMB's mission is to ensure that environmentally-sound and effective programs are present to prevent pests and disease vectors from adversely affecting DoD operations. The AFPMB offers a number of resources for IPMCs, including lists of pesticides and equipment in the federal stock system; directives, instructions, and other policy documents; pest management technical information; and a pest management literature retrieval service. The AFPMB Web site is <http://www.afpmb.org>.

1.4 The U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM). USACHPPM's mission is to provide health promotion and preventive medicine services to identify, assess and counter environmental, occupational, and disease threats to health, fitness, and readiness. USACHPPM entomology supports installations specifically to protect the soldier from the health threat posed by vector-borne disease and medically important

pests and to minimize the adverse effects of pesticides. This soldier oriented medical support differs from USAEC support for pest management programs which affect facilities for both indoor and outdoor pest control operations. Both organizations do work closely together in support of the Army pest management program. For more information see the USACHPPM website at <http://chppm-www.apgea.army.mil/>

1.5 The MEDDAC Preventive Medicine Section. The Preventive Medicine section at many installations is responsible for surveillance of pests and disease vectors on the installation that are medically important, and may negatively impact Soldier training and Family health and welfare. Installations without Preventive Medicine (PM) personnel on site generally receive PM support regionally from local installations that are staffed to provide PM services. Specifically, PM services include routine surveillance for pests such as cockroaches, rodents, and flies in food service facilities. Their responsibilities also include operating mosquito light traps and performing larval mosquito surveys for the installation's mosquito control program. The Preventive Medicine section forwards survey results to the installation pest management section or to an organization designated by contract for mosquito control operations.

1.5.1 The industrial hygienist (IH) periodically evaluates personal protective clothing and equipment for individuals storing, mixing, or applying pesticides on the installation, and assists the Occupational Health staff in determining the requirements for medical surveillance for these workers. The industrial hygienist's responsibilities also include evaluation of the ventilation systems in pesticide storage and mixing areas at both public works facilities and the golf course, as applicable. This work may be done in conjunction with the safety office.

1.5.2 Veterinary food inspectors perform surveys for insects and rodents that damage stored food in Troop Issue Support Activity warehouses and at the Commissary. Whenever pests are found, veterinary personnel should contact the IPMC.

1.5.3 Occupational health physicians and nurses perform annual medical surveillance (exams, blood work, etc.) on government pesticide applicators who apply pesticides on the installation. This includes DoD pest management technicians working at the public works or the golf course. Contract pest management technicians are not monitored at government facilities, but may be required by the contract to be evaluated, at the contractor's expense, at a commercial medical facility.

1.6 Directorate of Public Works (DPW). The majority of all installation pest management operations (pesticide applications) are performed by the DPW. If the installation pest control function has been contracted, it usually is managed by the DPW. The performance of the pest control function on some installations may be separated into indoor and outdoor operations or combined and performed by one shop. The Roads and Grounds section controls weeds and other unwanted vegetation on the installation. The majority of the pesticides used by this section are herbicides. Herbicides may be stored in a separate facility but more commonly are found stored together in the same building and kept separate from other pesticides in a combined pest control storage and mixing facility. The Buildings and Structures section is responsible for surveillance and control of indoor and outdoor pests that damage real property or natural resources, or pests which affect the health and welfare of the command. A pest control shop, with storage and

mixing capabilities, is usually found in this section. All pesticide applications on the installation must be conducted by certified applicators regardless of their work section. Contractor applicators must be state-certified in appropriate categories for which work is to be performed, at the time the contract is let. [Note: Preventive medicine and veterinary personnel conduct surveillance only. Control of medically important pests is usually performed by personnel from public works.]

1.6.1 Preventive Maintenance. This section of DPW does not perform pest surveillance or pesticide applications. This section is usually staffed with carpenters and maintenance repair personnel who may be called upon to eliminate pest harborage in government buildings. This may include elimination of cracks, crevices, and other voids which provide cockroach harborage; replacement of screens to exclude mosquitoes and flies; or elimination of openings under doors and around pipes, or holes in walls. The pest control and preventive maintenance sections should have a good working relationship. Preventive maintenance is the pest control section's early warning system by bringing to attention insect and rodent infestations or conditions that are conducive to pests before they become a control issue. Their work can also enhance customer service.

1.6.2 Pest Management Quality Assurance/Quality Control. The Pest Management Quality Assurance Evaluator (PMQAE) must be a DoD employee and be DoD-accredited in the appropriate EPA categories in order to measure performance of pest control work performed on the installation by contractors. A written quality assurance surveillance plan is normally used to evaluate the work being performed by the contract pest management technicians.

1.7 Family Housing Self-Help Program. Installation commanders have the authority to establish self-help programs that improve the quality of life for both Soldiers and civilians working on the installation. The Self-Help Pest Control Program offers selected pesticides and equipment authorized for issue to Family housing and building occupants. Items for issue include mouse traps, ready to use insect baits and aerosols, etc. Additional items may be authorized but first must be approved by the designated DoD-certified pest management consultant.

Chemicals are NOT routinely issued through the installation self-help program; if the Army Senior Consultant authorizes an installation to issue chemicals through the self-help program, then they must be accounted for and a list of items issued be provided monthly to the IPMC for pest control record keeping purposes. A current list of standard items that can be issued through self-help is found in Appendix D. The IPMC needs to document that individuals who receive pesticides from the self-help program receives training material on the proper use and safety of these pesticides.

1.8 Fire Prevention and Control. The fire department is responsible for evaluating all pesticide storage facilities on the installation to ensure these facilities meet standard safety and construction codes related to fire prevention and suppression. Each pesticide storage facility should be covered by a pre-fire plan located in each respective shop or at the fire department. The fire department is also charged with being the First Responders to a hazardous materials spill situation (e.g., pesticides). Current pesticide inventories, to include MSDS, must be provided to the fire department to ensure for proper personal protection in case of fires involving

pesticides. (For additional information, see the Armed Forces Pest Management Board TG 16, Pesticide Fires: Prevention, Control & Cleanup).

1.9 Environmental Office. Depending on the installation, the majority of all installation pest management program oversight is performed by the environmental office. The IPMC often works for the environmental office on the installation. Pest control may be under the supervision of the environmental office or one of the other branches in the DPW (i.e., Building and Structures, Buildings and Grounds). Whichever the case, the environmental office is generally the lead for environmental management of the pest management program, and is an integral player in the Integrated Pest Management Plan approval process. The environmental office can also provide information on endangered and threatened specie, and is responsible for environmental assessments performed for the installation pest management program.

1.9.1 Natural Resources. The natural resources staff on the installation may have programs that require coordination with the IPMC. These programs may involve the use of integrated pest management, insecticides, or herbicides in the management and control of invasive or noxious weeds in natural areas of the installation, including forested areas. Other examples of areas where the IPMC may coordinate with the natural resources staff are the control of insects and arthropods in natural areas of the installation, and management of wildlife that interferes with base operations, training, and airfield safety.

1.9.2 Spill Response Team. The spill response team consists of various key personnel on the installation who provide immediate help and expertise when hazardous materials are spilled. The pest control supervisor may be included on the team, along with fire department personnel, medical personnel, the PAO, and environmental specialists. The necessary actions needed to clean up pesticide spills are included in this team's training and installation planning documents. (For additional information, see the Armed Forces Pest Management Board's TG 15, Pesticide Spill Prevention and Management.)

1.9.3 Hazardous Materials Coordinator. The hazardous materials coordinator is responsible for maintaining the spill contingency plans on the installation, including pesticides.

1.10 Safety Office. Organizationally, this office is located in the Provost Marshall's Office and is responsible for the installation safety program, including personal protection for pesticide workers. Much of their work is done in conjunction with medical personnel described above. The safety office is responsible for ensuring pest management technicians are included in the installation respiratory protection program.

1.11 Directorate of MWR & Community Activities.

1.11.1 Golf Course. Most golf courses perform weed and turf pest control have a pesticide storage and mixing facility that is separate from DPW. Golf course personnel may apply pesticides to greens or fairways to control unwanted vegetation, turf disease or insects. On some installations, this work may be contracted or performed by the installation's public works pest management personnel. When pest control is conducted by in-house personnel, they must meet the same training, certification, record keeping requirements, safety, and personal

protection standards as any DoD individuals who apply pesticides on the installation. Contract applicators must be state-certified in the appropriate categories for which work is performed at the time the contract is let. Golf course operations that use pesticides in their programs must be included in the installation IPMP.

1.11.2 Child Development Center (CDC). The child development center should neither store nor apply pesticides. However, it is included in this guidance because of the sensitivity of children to pesticides and the prohibited use of herbicides in areas where children play. Recently, the USAEC and IMCOM have developed procedures for installations to implement the IPM Star standards established by the IPM Institute of North America at their installation CDC and CYS programs in an effort to protect children from potential health risks associated with the use of pesticides. For more information on the IPM Star standards, or on having your installation evaluated for IPM Star accreditation, please contact the USAEC or visit the Web site at <http://aec.army.mil/usaec/pest/index.html>.

1.12 Defense Reutilization and Marketing Office (DRMO). The DRMO is part of the Defense Logistics Agency. The DRMO may support several military installations in a geographical area. Not all installations have a DRMO on-site. A service performed by the DRMO for the installation is the disposal of excess or unserviceable pesticides. Most DRMOs do not take physical custody of pesticides but simply process the paperwork for future disposal or redistribution if the pesticides are still usable. The pesticides remain with the generator of the excess pesticides until DRMO provides transfer instructions. If you have serviceable pesticides that are in excess of your needs, you should also contact the USAEC for assistance with redistribution of these materials to other installations that can use them.

1.13 Range Operations. Invasive species, noxious weeds, overgrown vegetation, and vertebrate pests can adversely impact the quality of Army training areas and ranges, decrease the installation's training capability, and degrade the sustainability of training operations. The IPMC should maintain close contact with the Integrated Training Area Management (ITAM) program manager and range operations manager for collaboration on range projects and programs that require integrated pest management operations and/or pesticide use.

CHAPTER 2

RESPONSIBILITIES

2.1 Garrison/Installation Commander.

- a. Designates in writing an Installation Pest Management Coordinator for all installation pest management activities. An example of an appointment memorandum for the IPMC can be found in Appendix M.
- b. Approves and supports implementation of the IPMP.
- c. Ensures that installation personnel performing pest management operations receive appropriate training, certification, and accreditations.

2.2 Director of Public Works.

- a. Determines the requirements for installation pest management operations.
- b. Staffs the pest management program to satisfactorily meet operational requirements.
- c. Initiates requests for aerial application of pesticides when necessary.
- d. Determines the scope of contract pest management operations, and monitor these operations with trained and accredited personnel.
- e. Procures adequate supplies of pesticides and pesticide dispersal equipment, and ensures that the supplies and equipment are properly stored and maintained.
- f. Maintains permanent records of all pest management operations, including surveillance activities and pesticide applications.
- g. Ensures pest management personnel, including contractors, are certified/accredited to meet Army and DoD standards.
- h. Ensures all installation pesticide storage and mixing facilities meet established standards for the proper storage and mixing of pesticides.

2.3 Director of Community Activities.

- a. Procures adequate supplies of pesticides and pesticide dispersal equipment for pest management operations on the installation golf course and/or ball fields, and ensures that the supplies and equipment are properly stored and maintained.

- b. Ensures that golf course personnel performing pest control are trained and certified to meet DoD standards, including contract pesticide applicators.
- c. Ensures pesticide storage and mixing facilities meet established standards for the proper storage and mixing of pesticides.
- d. Maintains permanent records of all pest management operations on the golf course, including surveillance activities and pesticide applications.

2.4 Medical Departments.

2.4.1 Preventive Medicine Service.

- a. Conducts surveillance for pests which could adversely affect the health and welfare of installation personnel, their dependents, and civilian employees.
- b. Coordinates with local health officials to determine the prevalence of disease vectors and other public health pests in the area surrounding the installation.
- c. Monitors pesticide sales at the self-service supply center, the commissary, and the post-exchange.
- d. Evaluates the health aspects of the pest management program.

2.4.2 Veterinary Service.

- a. Conducts surveillance for pests of stored products in food warehouses.
- b. Provides advice to pet owners concerning pests which may adversely affect their animals.

2.5 Building Occupants.

- a. Apply and maintain good sanitary practices to prevent pest infestations.
- b. Use all non-chemical and chemical pest control techniques available through the self-help program to the fullest extent before requesting further assistance for pest management services from public works.
- c. Apply only those self-help pesticides approved for use by the designated DoD-certified pest management consultant.
- d. Cooperate fully with public works personnel and contractors in scheduling pest management operations, to include preparing the areas to be treated.

2.6 Pest Management Personnel.

- a. Use integrated pest management techniques to the maximum extent possible for surveillance and control of pests.
- b. Attend appropriate pest management training, and maintain appropriate certification and accreditation.
- c. Conduct pest management operations in a manner that minimizes risk of contamination to the environment and personnel.
- d. Ensure that superiors are kept informed of changes in pest management requirements.
- e. Request pest management supplies and equipment in a timely manner.
- f. Record all pest management operations, including surveillance activities and pesticide applications, and provide these records to the IPMC.
- g. Maintain effective communication and liaison with installation health and environmental officials.
- h. Ensure that all pesticides are reviewed and approved by the designated DoD-certified pest management consultant prior to their use.
- i. Coordinate with the IPMC, as necessary.

2.7 Installation Pest Management Coordinator. The IPMC is integral to the operation of a compliant and effective pest management program. IPMC duties and responsibilities are discussed at length in Chapter 3.

CHAPTER 3

INSTALLATION PEST MANAGEMENT COORDINATOR RESPONSIBILITIES

3.1 General Responsibilities.

- a. Prepares, monitors, and updates the IPMP.
- b. Coordinates with all personnel and commands responsible for conducting pest surveillance or controlling pests to ensure all applicable pest management operations information, including surveillance activities and pesticide applications, are recorded and reported. Monitors the sale and distribution of pesticides on the installation.
- c. Acts as a liaison for installation pesticide applicators to the environmental office, safety office, fire department, industrial hygienist and Preventive Medicine Service.
- d. Oversees the technical aspects of the self-help pest management program with respect to pest management items issued through self-help and pest management awareness training of Family housing residents
- e. Coordinates with commissary and Post Exchange personnel who are involved with pest prevention in those facilities and pesticide display and sales.
- f. Ensures that the health and safety of those applicators who apply pesticides on the installation is monitored by Occupational Health and Safety.
- g. Monitors and tracks certification and continuing pest management training for pesticide applicators on the installation.
- h. Provides assistance for the preparation of pest management contracts by coordinating with DPW and USAEC-designated DoD-certified pest management consultants.
- i. Maintains pest management records for all pest management operations performed on the installation, including surveillance activities and pesticide operations; and reports yearly pest management information to the USAEC DoD-certified pest management consultant.
- j. Coordinates with local, state, and federal agencies, as necessary, to conduct the installation's pest management program.
- k. Monitors the sale and distribution of pesticides on the installation.
- l. Functions as the installation's primary point of contact for pest management activities.

3.2 Integrated Pest Management Plan. The IPMC should play a major role in seeing that the IPMP is written to fully describe the pest management program, is reviewed annually and as needed, and is updated as required. For more information on IPMPs, see Chapter 5. Annual updates of existing IPMPs require the IPMC to submit a Pesticide Use Proposal (PUP) form and Plan Update Form (PUF) to USAEC for review and approval. When extensive revisions or IPMP rewrites are necessary, the USAEC Model Plan can be used as a guide. The USAEC Model Plan is a streamlined version of previous models for IPMPs, and is designed for use by both large and small installations. IPMCs should program funding for their plan to be revised or rewritten approximately every five years in an effort to address major changes on the installation, activities associated with BRAC actions, direction from the garrison commander, or significant changes in the pest management function. Installations that fall under the purview of the National Guard or DLA, should have their plans reviewed by their respective DoD-certified pest management consultant.

USAEC has recently implemented format changes in the IPMP. These changes include shortening the appendices from those previously outlined in the 1997 USAEC User's Guide for Pest Management Plans. The appendices now include: IPM Outlines, PUP, Points of Contact, and Pesticide Applicator Certifications. These changes do not mean that the appendices found in older plans do not contain valuable information; however, when the existing IPMP is rewritten, these appendices can be considered for removal from the IPMP and kept separately in a companion file as additional information for the IPMC. By limiting the number of appendices in the IPMP, the revised IPMP is easier to review, update and use as a working document. USAEC can provide additional information on the format for revising the IPMP.

3.2.1 Plan Update Form (PUF). The PUF requires the IPMC to provide short descriptions and information on specific aspects of the installation's pest management program. The PUF also contains a field that can be used to describe minor revisions to the existing IPMP. A copy of the PUF and instructions for completing the PUP are provided in Appendix K.

3.2.2 Pesticide Use Proposal (PUP). The PUP lists those pesticides that the installation intends to use during the next fiscal year (FY). The insecticides listed in the PUP are tied to the IPM outlines in the installation's Integrated Pest Management Plan. A copy of the PUP and the instructions for completing the PUP are provided in Appendix L.

3.3 Record Keeping and Reporting. Record keeping is an essential part of the installation's pest management program. As the IPMC, you should coordinate with all of the installation activities conducting pest management surveillance activities, other IPM operations, and pesticide applications to ensure all applicable information is recorded. Additionally, the IPMC is responsible for compiling and summarizing pest management records and reporting them to the designated DoD-certified pest management consultant.

One of the DoD Measures of Merit requires the installation to report pesticide use, in pounds of active ingredient, annually to Office of the Secretary of Defense (OSD). See Chapter 6 of this guide for more information on MoMs. See Chapter 4 for more detailed information on pest management records and reports.

3.4 Installation Self-Help Pest Control Program. The IPMC is responsible for technical oversight of the self-help pest control program. Functional oversight for the self-help program is usually found at the housing division of public works. The self-help program is described in more detail in Chapter 12. The IPMC must ensure the items being issued have been approved by the designated DoD certified pest management consultant and thus should periodically visit the self-help store. If an unapproved item is found, then the IPMC should instruct self-help personnel to discontinue issue of the product/device until receiving further instructions. The IPMC should then contact the USAEC DoD-certified pest management consultant for further guidance. If the product is not approved for use by USAEC or the Army senior consultant, the IPMC should instruct self-help personnel to provide the item to the pest control shop or turn the item in for disposal, as appropriate. All pesticides issued through self-help are reportable, and the amounts (PAI) should be included in the annual pesticide Measure of Merit report to OSD.

3.5 Health and Safety of Pesticide Applicators.

a. The health and safety requirements for pest management personnel are covered in Chapter 10. The IPMC should ensure that applicators meet the requirements of Chapter 10, including receiving an annual physical. The IPMC should ensure that the results of health exams and any diagnosis are provided to the employee and section supervisor. Monitoring the health and safety of commercial contract applicators is the responsibility of the contractor unless otherwise provided for in the contract as government-furnished services.

b. Checklists for tracking medical surveillance for pesticide applicators and hazard communication training can be found in Appendices E and F, respectively.

3.6 Pesticide Applicator Training and Certification. Excluding the pesticides issued to personnel and applied through the self-help program, all personnel who apply pesticides on the installation must either be DoD (in-house) or state (contractor) certified. Additionally, personnel who oversee contracts must receive training and accreditation. The IPMC should maintain a list of all applicators and their certifications/accreditations to include dates certified, certification categories, and the expiration date. A checklist for monitoring pesticide applicator certifications can be found in Appendix G. Training and certification requirements are covered in detail in Chapter 9. For additional details on training requirements and accreditations for Pest Management Quality Assurance Evaluators (PMQAE) and IPMCs, you should contact your designated certifying official.

3.7 Pest Control Contracting. Draft pest control specifications should be sent to the IPMC for technical review prior to solicitation. The IPMC should send these drafts to the designated DoD certified pest management consultant for review and approval. Copies of all pest management contracts should be kept in the IPMC office for immediate reference. The IPMC should periodically contact the Pest Management Quality Assurance Evaluator (PMQAE) or Contracting Officer's Representative (COR) to determine if contract work is proceeding satisfactorily. More details on pest control contracting are provided in Chapter 13.

3.8 Coordinate with Local, State and Federal Agencies. The IPMC may be asked to represent the installation in coordinated efforts to meet common goals between the installation

and local municipalities or other government agencies. Examples of cooperative efforts include noxious weed and control of invasive species or cooperative agreements between the installation and local mosquito control districts. Additionally, universities and federal agencies, such as USDA and the Forest Service, that support the DoD's pest management program usually work in close cooperation with installation pest management personnel. USAEC can provide guidance and assistance, as needed.

3.9 Sale and Distribution of Pesticides on the Installation. Pesticides may be sold in the post-exchange (especially the garden center) or commissary. These products must be registered by the EPA for general use. Restricted use products cannot be sold. Pesticide products sold are grouped into several categories: products applied to pets for ectoparasite control (i.e., fleas on dogs/cats), insect repellents, household and lawn, and garden products.

If the store sells liquid pesticide formulations it is required to have spill cleanup kits in the immediate vicinity of the pesticide display and in the storage area. Store personnel should be familiar with cleanup procedures and with installation spill contingency plans.

Preventive Medicine and Veterinary Service personnel are responsible for evaluating retail sales of pesticides on the installation and storage and handling of pesticide products. The IPMC should periodically accompany these medical personnel when they evaluate pesticide sales.

Guidance for the display and sale of pesticides can be found in [AFPMB TG-17, Storage and Display of Retail Pesticides](#). Pesticides may also be sold to pet owners at the Veterinary Clinic. These products should also be for general use and registered by the EPA.

3.10 Agricultural Outleases. Some land on Army installations is leased to private individuals for agricultural purposes. Examples of outleases are crop production and livestock grazing. All pesticide applications on leased land must be included in the annual Pesticide Use Proposal, conform to the reporting requirements in the pest management plan and other contract documents, and must be reported to the IPMC. Copies of all outlease documents involving pesticide use should be kept on file in the IPMC's office.

3.11 Design and Review of New Construction. Construction projects should be reviewed to include pest prevention and exclusion in the design. Engineering and medical personnel should review the design of new buildings or other structures to ensure "pest proofing" is designed into the project to eliminate or minimize potential insect and rodent entry points and harborages.

3.12 Documents Relevant to Pest Management. The IPMC should be familiar with all documents from organizations on the installation that are directly related to the pest management program, or that describe operations that can be indirectly or directly impacted by pests and pest management activities. Chapter 5 provides examples of documents that can provide the IPMC with relevant information to plan and administer the pest management program.

CHAPTER 4

PEST MANAGEMENT OPERATIONS

4.1 Pesticides and Equipment. All materials and equipment used in the pest management program are furnished by the government. For contracting, the contractor should furnish all facilities, materials and equipment (off the installation) to perform contract requirements. Only pesticides and pesticide application equipment required by the program should be maintained on the installation. Excess materials and equipment should be turned in to DRMO to minimize health and environmental hazards. Also, the designated Pest Management Consultant (PMC) can assist installations in asking other Army installations if they are interested in receiving excess equipment and pesticides.

4.1.1 Pesticides. Pesticides shall be approved prior to use through the submittal of a [Pesticide Use Proposal \(PUP\)](#) or an [Out of Cycle Pesticide Use Request \(OCPUR\)](#). Pesticides should be ordered in quantities as needed to conduct pest control operations in a timely manner without over stocking or storing large inventories. For example, herbicides that are required for use during a specific time of year (e.g., applied in the spring when weeds are emerging) may be ordered in the fall of the previous year. Each supervisor with responsibility for a pesticide storage area must maintain a running pesticide inventory. Copies of the inventory should be periodically sent to the IPMC, Fire Department, Health Clinic, and Military Police. The PUP is a listing of pesticides that are “intended for use” and does not substitute for an inventory of pesticide quantities on hand.

4.1.2 Pest Management Equipment. An inventory of pesticide application equipment should also be maintained at each respective pest control shop (e.g., public works, golf course). The IPMC should visit the respective pest control activities on the installation to see first-hand and be familiar with what types and numbers of pest management equipment are on hand.

4.2 Pesticide Storage and Mixing Facilities. Storage for pesticides and application equipment may be consolidated at one central storage and mixing facility or may exist at several locations. For example, the buildings and structures section, the roads and grounds section, and the golf course may all have their own pest control facilities. The Armed Forces Pest Management Board (AFPMB) [Technical Guide \(TG\) 17, Military Handbook, Design of Pest Management Facilities](#) describes DoD and federal standards for the construction of pest control facilities. The industrial hygiene, fire, and safety offices can also provide assistance for evaluating appropriate standards for a conforming storage facility.

4.2.1 Pesticide Mixing. Pesticides are usually mixed at the pest control facilities. However, other mixing sites may be used to fill pesticide sprayers at remote locations when it is too time consuming to return to the shop. The AFPMB TG 17 can also be used to design and evaluate mixing sites and [TG 15, Pesticide Spill Prevention and Management](#), is also a good resource.

4.3 Pest Management Record Keeping and Reporting.

4.3.1 Requirements. In accordance with DoD Instruction 4150.7 and AR 200-5, installations must keep records of all pest management operations, including pest surveillance, non-chemical pest control, and pesticide applications. All pest management operations, including those conducted by NAF personnel and contractors, must be recorded. This includes all pesticide applications, non-chemical pest management measures, and all surveillance activities.

4.3.2 Forms. Several electronic forms are available from USAEC to record installation pesticide use and pest surveillance.

a. The Pest Management Maintenance Record (DD Form 1532-1 and DD Form 1532). DD Forms 1532-1 and 1532 are available in hard copy and computer file formats. DD Form 1532-1 is used to record daily pest management operations by individual sites. DD Form 1532 is used to create monthly summaries. Samples of DD Form 1532 and DD Form 1532-1, with instructions for filling out the form, are found in Appendix H of this guide. The computer file formats of the DD Forms do not allow for direct calculation of pounds of active ingredients used for the Department of Defense Measure of Merit #2 (MOM). Guidance on calculating pounds of active ingredient for the annual MoMs report can be found on the [USAEC Web site](#).

b. The Army Excel spreadsheet. This Excel spreadsheet provides a simplified method to record pest management operations and simultaneously obtains pounds of active ingredient data. The spreadsheet can be obtained from [USAEC](#) or the [AFPMB Web site](#).

c. The Integrated Pest Management Information System (IPMIS). The IPMIS database v.3.0 is only available for those installations with local technical support, because it is not supported by the Army. IPMIS can be downloaded from the [Armed Forces Pest Management Board Web site](#).

4.3.3 Reporting. Records must be compiled and summarized and reported to the designated pest management consultant.

CHAPTER 5

INSTALLATION DOCUMENTS RELEVANT TO PEST MANAGEMENT

5.1 Integrated Pest Management Plan (IPMP). A current Integrated Pest Management Plan is an Army and DoD requirement and defines the installation's pest management program(s). The IPMP identifies the scope and importance of pest-related problems, the assets and approaches to limit these problems, and the resources and strategies to meet program shortfalls. The IPMP should address all pest management operations at an installation, to include those by tenant and supported activities and lessees, and will be organized to meet criteria in the DoD instruction. The IPMP should provide descriptions of the resources found within the pest management program, other resources available on the installation, and additional resources available from the IPMC and designated pest management consultant. Because pesticides are used in this program, the integrated pest management plan must include descriptions for their proper storage, use, and disposal. A well-designed IPMP protects installation personnel and the environment by reducing the adverse effects of pesticides. The DoD requirements for IPMPs apply to all Army installations, regardless of the pest management workload. IPMPs are updated as necessary and will be reviewed at least annually by the command consultant.

5.2 Installation Master Plan. This comprehensive plan describes the physical characteristics of the installation and sites for future projects. The information in this plan can be useful in identifying buildings and resources that could be adversely affected by unmanaged pests. Contact the environmental office for this plan. This plan can also help you plan for future resources for the pest management program.

5.3 Installation 5-Year Plan. Many administrative elements relevant to the pest management program, such as recurring and projected requirements, may be found at some installations in their 5-year plan. This document identifies these requirements and the time frames for implementation. The 5-year plan also can help the IPMC to anticipate projected program changes and requirements.

5.4 Environmental Documents: Environmental Assessments (EAs) and Environmental Impact Statements (EIS). These are decision making documents on activities that can potentially impact sensitive areas, critical habitats, and rare and endangered species, such as from pesticide applications. These documents are the results of processes mandated by federal regulations in the National Environmental Policy Act (NEPA). It is important for the IPMC to coordinate installation pest management activities with the natural resources manager in an effort to determine the need for an EA or EIS. The IPMC can obtain these documents at the environmental office.

5.5 Installation Spill Plans: Installation Spill Contingency Plan (ISCP) and the Spill Prevention, Control, and Countermeasure (SPCC) Plan. These plans often include information on pesticide handling, particularly in situations where pesticides are stored on the installation. The IPMC should be familiar with each of these documents. These documents are usually available from the environmental office.

5.6 Integrated Natural Resources Management Plan (INRMP). This plan is available from the natural resources coordinator in the natural resources office. The INRMP discusses natural resource assets and programs for the installation. By reviewing the INRMP, the IPMC can gain insight into potential requirements to manage pests of natural resources on the installation such as forests, wildlife areas, wetlands, prairies, etc.

5.7 Integrated Cultural Resources Management Plan (ICRMP). This plan is available from the cultural resources manager in the cultural resources office. The ICRMP discusses the cultural resources and history of the installation, cultural resources laws, and the procedures the installation will follow to comply with the laws, and manage the sites and properties. By reviewing the ICRMP, the IPMC can gain insight into how compliance with cultural resources laws can affect pest management for historic buildings, archeological sites, Native American sacred sites, and other cultural resources.

5.8 Pest Management Contracts Statements of Work (SOW). The pest management SOWs describe legal and technical agreements between an installation and pest management contractors. The IPMC should be thoroughly familiar with all pest management SOWs and what the SOWs stipulate for oversight responsibilities. The SOWs should be on file with the pest management contracting officer's representative (COR) in the installation contracting office.

5.9 Standard Operating Procedures (SOPs). SOPs for pest management activities such as the public works pest management shop, the golf course pest management shop, to include pest management and surveillance activities like those provided by the Preventive Medicine Service contain useful information on routine operations. The IPMC should coordinate with these groups to see that these SOPs are kept current.

5.10 Interservice Support Agreements (ISSA). Pest management services may be provided to other government agencies on or off the installation through ISSA's. For example, a Reserve Center may be provided pest management services on a non-reimbursable basis.

CHAPTER 6

DOD PEST MANAGEMENT MEASURES OF MERIT

6.1 Background. The DoD continues to make progress in achieving and maintaining pest management Measures of Merit (MoMs). The program began in 1993 and has since achieved a 50% reduction in DoD-wide pesticide use from 1993-2000. The original MoMs were documented in DoDI 4150.7, *DoD Pest Management Program*, and were later updated in 2004. The current MoMs have an end date of 2010.

6.2 Measures of Merit. The measures of merit for installation pest management programs are:

Measure of Merit #1 – IPM Planning.

Through the end of Fiscal Year (FY) 2010, 100 percent of DoD installations will maintain IPM plans that are reviewed and approved by a DoD-certified pest management consultant and are updated annually by the installation pest management coordinator.

Measure of Merit #2 – Pesticide Use Reduction.

Through the end of FY 2010, the DoD will maintain the reduction goal in annual pesticide use by both government and contractor pesticide applicators on DoD installations. This reduction goal is set at an average of the FY 2002 and 2003 usage, which is 389,000 pounds of active ingredient (45 percent of the original 1993 baseline – a 55 percent reduction).

Measure of Merit #3 - Pesticide Applicator Certification.

Through the end of FY 2010, 100 percent of DoD pesticide applicators will be certified. Direct hire employees have a maximum of 2 years to become certified after initial employment. Contracted employees shall have appropriate state or host nation certification in the appropriate categories at the time the contract is let.

6.3 Guidance. Guidance on calculating and reporting these Measures of Merit can be found in Appendix I. Additional information can be found on the [AFPMB Web site](#).

CHAPTER 7

INTEGRATED PEST MANAGEMENT

7.1 Definition. Integrated Pest Management (IPM) is a planned program, incorporating continuous monitoring, education, record-keeping, and communication to prevent pests and disease vectors from causing unacceptable damage to operations, people, property, materiel, or the environment. IPM uses targeted, sustainable (effective, economical, environmentally sound) methods including education, habitat modification, biological control, genetic control, cultural control, mechanical control, physical control, regulatory control and, where necessary, the judicious use of least-hazardous pesticides.

7.2 Chemical Control and Non-Chemical Control. Chemical control methods are almost always a temporary measure and are therefore more expensive in the long run. Non-chemical control methods, which may initially be more expensive than pesticides, will usually be more cost effective in the long run. Non-chemical control methods have the added advantage of being nontoxic, thereby reducing potential risks to human health and the environment. The priority use of non-chemical control methods in lieu of chemical control with pesticides will assist your installation in maintaining the Army's and DoD's goal of reducing pesticide 50 percent.

7.2.1 Physical Control. This method of control physically alters the zone in which a pest lives or occurs and is used to excludes pests. Examples of this type of control include harborage elimination through sealing or filling voids, screening, mechanical traps or glue boards, and nets and other barriers to prevent entry into buildings.

7.2.2 Mechanical Control. Mechanical control methods use devices to control pests. Examples of mechanical control methods are sticky traps, rodent traps, mosquitoes and fly swatters.

7.2.3 Cultural Control. Strategies used in this method involve manipulating environmental conditions to prevent, suppress, or eliminate pests. For example, maintaining healthy turf will prevent many turf diseases and pests. Sanitation through elimination of food and water for pests can prevent pest populations from becoming established or from significantly increasing.

7.2.4 Biological Control. In this control strategy, predators, parasites or disease organisms are used to control pest populations. Insects may be used to control invasive plant species. BT (bacteria) is used for mosquito control. Parasitic flies are used for the suppression of red imported fire ants. Some biological control agents give excellent control by themselves, but usually biological control is used in conjunction with other control methods.

7.2.5 Chemical Control. Pesticides are used for chemical control to kill pests and disease vectors. Least toxic pesticides should be used as a last resort in combination with other control methods in integrated pest management programs. Note that pests and disease vectors can develop resistance to the pesticide itself or components in bait formulations that will cause the pesticide to be ineffective. In recent years, the EPA has registered newer pesticides that have

lower toxicities and shorter residual lifetimes in the environment. In some situations, these reduced risk pesticides may need to be applied more often to as they breakdown more quickly in the environment than older pesticides with long residual lifetimes.

CHAPTER 8

PEST SURVEILLANCE AND CONTROL GENERAL CONSIDERATIONS

8.1 Integrated Pest Management. The integrated pest management program consists of surveillance, prevention, and control of pests on the installation. Much of the program focuses on the detection of pests, identification of those pests, the damage they cause, locations where and times when they are found, control methods, and the institutional framework through which this work is accomplished. Army IPMPs outline installation procedures.

8.2 Pests. A wide number of disease vectors and pests can adversely impact each individual Army installation. Disease vectors and pests impact Army installations in three major categories: (1) they cause human illnesses and diseases; (2) they cause physical and economic damage to installation facilities, natural resources, and training assets; and (3) they may require actions due to their regulatory status by federal, state or local laws and regulations. The prioritized list below provides an overall scheme of the relative importance of general disease vectors and pests from highest to lowest importance. The IPMP prioritization for surveillance and control of individual disease vectors and pests, however, is based on a consideration of many factors:

- a. Disease vectors and medically important arthropods (can cause human illnesses and diseases)
- b. Quarantine pests (regulated by federal, state or local laws and regulations)
- c. Real property pests (structural/wood destroying pests)
- d. Stored products pests (pests of food and food products)
- e. Ornamental plant and turf pests (pests of trees, plantings, and grass)
- f. Undesirable vegetation (noxious weeds and vegetation)
- g. Animal pests (rodents, nuisance birds, and nuisance wildlife)
- h. Household and nuisance pests (pests that invest or invade structures)
- i. Other pests (includes miscellaneous pest groups not listed above – may include invasive species).

NOTE: The priority listing shown above does not in any way suggest the volume of work or resources dedicated by the pest management program on any given installation. For example, the greatest pest management workload on an installation may center on household and nuisance pests. However, when there is a real threat to public health of installation personnel from a disease transmitted by disease vectors (e.g., mosquitoes that carry West Nile virus or other mosquito-borne diseases), then the installation will normally shift resources to manage

disease vectors until the disease threat is reduced to an acceptable level. At that time, normal work levels in other pest management areas would resume.

8.3 Responsibility. On most installations a variety of personnel from different installation activities conduct both pest surveillance and control operations. Further discussion of this topic can be found in other sections of this guide and in your installation's IPMP. Below are general comments on pest management operations and pesticide applications for several pest management categories.

8.3.1 Insect and Rodent Control. The majority of this type of work on most installations is found in the cantonment area or on range and training areas where buildings and other structures are found. This category of pest control includes surveillance and pesticide applications on golf courses for grubs and webworms, as well as control of pests on desirable trees and shrubs (e.g., spruce bark beetle, tussock moth, gypsy moth, etc.). The following are generalizations, concerning the control of insects and rodents:

- a. Their control is generally intermittent in occurrence. In Family housing, offices, and warehouses, the work may be based on requests versus in dining facilities, and food storage areas where the work may be as scheduled as a recurring service.
- b. Usually, small amounts of pesticide are applied per treatment; the pesticides used are usually applied at low label rates (e.g., 0.5-1.0 %). In addition, the insecticides used are applied as baits in prepackaged containers; to cracks, crevices, and small voids, or small areas; and are not usually applied over large land areas.
- c. Insect and rodent problems are commonly encountered in spring, summer, and fall, and at the change of seasons.
- d. The first choice of a pesticide application over other non-chemical control methods is not an acceptable IPM practice until other IPM techniques have been integrated to address the long-term solution.
- e. Self-help may be a good choice for control of some pests, such as in Family housing and office buildings.

8.3.2 Vegetation Management. By its nature, vegetation control is outdoor pest control and may be seasonal in occurrence (depending on the climate). Control of unwanted vegetation using herbicides can be one of the greatest pounds of active pesticide ingredients usages on the installation in situations where herbicides are used to control vegetation over large acreage and where the herbicides used are applied at higher rates.

Total vegetation control is best done when rain is available and plants are actively growing. Most herbicides do not work well when the weather is hot and dry. In temperate climates, control of broadleaf weeds is often enhanced by a late fall application of a selective herbicide that only kills broadleaf plants.

CHAPTER 9

TRAINING, CERTIFICATION, AND ACCREDITATION

9.1 General Requirements. All individuals who apply pesticides on Army installations must be certified, either by the DoD (only DoD employees may be certified through DoD pest management courses) or through the state where the installation is located (non-DoD civilian personnel). The exception to this rule is for personal relief by uncertified personnel through the self-help pest management program. Detailed guidance on certification of pesticide applicators working on Army installations can be found in:

- a. [DoD 4150.7-P](#) - Plan for the Certification of Pesticide Applicators.
- b. [DoD 4150.7-M](#) - DoD Pest Management Certification and Training Manual.

9.1.1 DoD Employees. All pest management personnel must be certified in the appropriate EPA categories for the work being performed or to supervise other employees work in those categories. To obtain initial DoD certification individuals must normally attend a three-week course. However, personnel with a qualifying college degree in the biological sciences (e.g., foresters, land managers, entomologists) have the option to take this course by correspondence with approval from their certifying official.

The DoD recertification cycle is every three years. DoD recertification training is one week long DoD sponsored training course. The Army course is offered at Fort Sam Houston, Texas. Course schedules for Army, Navy and Air Force courses can be found on the [AFPMB Web site](#). An extension (six months) can be granted (prior to expiration) to individuals who, through unforeseen circumstances (e.g., course cancellation, illness, funding), cannot meet the three-year deadline for recertification training.

State-certified individuals must comply with their local recertification standards which may vary from one to five years. Some state recertification is accomplished through examination while other states offer continuing education credit in lieu of testing. There are no waivers or extensions granted by DoD for state-certified individuals whose certification lapses.

9.1.2 Contract Employees. Any contractor who applies pesticides on an Army installation shall be certified. Contractors will be certified by the state where the installation is located. Certification shall be in the categories appropriate for the work being performed at the time the contract is let. For more information about state-equivalent certification categories click <http://aec.army.mil/usaec/pest/pest05.html>. Contractors shall be certified prior to the beginning of the contract and will provide the government with copies of current pesticide applicator certifications prior to the start of any work.

9.2 Pest Management Quality Assurance Evaluators and Installation Pest Management Coordinators. Training for IPMCs and QAEs is conducted through specially designed courses offered by AMEDD C&S, Fort Sam Houston, Texas. Successful completion of this training leads

to accreditation, not DoD pesticide applicator certification; personnel are not certified to apply pesticides after taking the IPMC/PMQAE course.

9.3 Certification Categories. Although both DoD and state certification programs comply with the same EPA standards, a number of state pest control categories do not match up directly with those in DoD. After extensive research and in cooperation with the EPA, the U.S. Army Environmental Command has developed a Web site that compares state certification categories with DoD certification categories. This online public tool will help installation personnel determine which state certification categories are appropriate for a particular pest control service. The site is available at <http://aec.army.mil/usaec/pest/pest05.html>.

Examples for each EPA category are given for the more common types of work found at most installations.

Category 2: Forest Pest Control. This work involves spraying trees for forest pests such as tussock moths, bark beetles, or gypsy moth. The applicators for this work are usually Foresters (government employees) or contractors with equivalent state certification.

Category 3: Ornamental and Turf Pest Control. This work involves spraying grass areas such as golf courses, parade fields, and lawns in Family housing areas for insects such as grubs and webworms, or shrubs and ornamental trees for insects such as aphids, bagworms, or scale insects. Applicators certified in this category can apply pesticides in the cantonment area, but not in forested stands.

Subcategory 3a: Soil Fumigation Pest Control. This work is usually performed by contactors or agricultural lessees with equivalent state certifications for pests such as soil nematodes.

Category 5: Aquatic Pest Control. Pesticide applications made under this category are for plants that are emergent in standing in water, or those plants living submerged beneath the water's surface. This work is often performed by golf course personnel on water hazards or ponds, or by public works applicators for applications to aquatic weeds, such as purple loosestrife, growing in and directly around ponds, streams, and wetland areas. Pesticides applied by fish and wildlife or public works personnel to kill unwanted fish in ponds are also covered under this category.

Category 6: Right-of-Way Pest Control. Pesticide applications made under this category are used to control unwanted vegetation under power lines or aircraft approach lighting; along fence lines; on railroad tracks; around utility poles, fire hydrants, and electrical substations; and along road shoulders.

Subcategory 6a: Grassland and Non-Crop Agricultural Land Pest Control. Control of noxious or invasive weeds, mainly on range and training areas are examples of applications made under this subcategory.

Category 7: Industrial, Institutional, Structural and Health Related Pest Control. The

majority of pesticide application in the cantonment area is usually found in this category. Work includes control of insects (e.g., cockroaches), rodents, and birds and is usually performed in and around buildings such as Family housing, offices, barracks, food serving facilities, and warehouses.

Subcategory 8: Stored Products Fumigation Pest Control. This specialized type of work involves fumigation of insect-infested food products, usually found at the commissary, post-exchange, or troop issue subsistence activity. Fumigants are dangerous poisons and are usually applied by specialized contractors.

Category 8: Public Health Pest Control. An example of this type of work is outdoor mosquito fogging.

Category 10: Demonstration and Research Pest Control. This type of work is rarely encountered at the installation level and may involve pesticide treatment of agricultural food plots or other special projects not tied directly to maintenance of the infrastructure.

Category 11: Aerial Pest Control. This category is required whenever pesticides are applied by helicopters or airplanes. In order to obtain certification in this category, pesticide applicators must have certification in at least one other category. In addition, this type of work must be preceded by an Environmental Assessment of Impact Statement. Personnel who require this category of certification must attend separate training with the Air Force. For more information, contact your certifying official.

CHAPTER 10

HEALTH AND SAFETY

10.1 Medical Surveillance of Pest Management Personnel. All government personnel who apply pesticides on the installation (excluding self-help pest management) should be included in a medical surveillance program. All government pesticide applicators are usually medically monitored by the Occupational Health section at the hospital or health clinic. Contract pest management technicians may be required by the contract to be medically monitored. If this is the case, physical exams and blood tests are usually conducted by a local physician or clinic off the installation. A typical program consists of the elements below.

10.1.1 Physical Examination. An initial, pre-employment physical examination is conducted to establish that the individual is physically capable of wearing a respirator (if required) and to establish a baseline red blood cell (RBC) cholinesterase level. This physical examination also includes liver and kidney function tests, a complete blood count, and a respiratory evaluation. A physical examination of the same scope as the initial examination is conducted annually.

10.1.2 Cholinesterase Testing. When cholinesterase inhibiting substances (CIS) (carbamate or organophosphate pesticides) are used, the RBC cholinesterase level is monitored at least twice a year (before and after the summer spray season) and more frequently if CIS are heavily used or if the individual exhibits symptoms of CIS poisoning. Removal from work is instituted when the RBC cholinesterase level is depressed to 75 percent of the baseline level or less. Return to work is permitted when the level has returned to 80 percent or more of the baseline level. Some of the common symptoms produced by cholinesterase inhibiting substances are listed the table below.

Note: Installations are encouraged to use non-CIS, if suitable substitutions are available.

Table. Common Symptoms Produced by Cholinesterase Inhibiting Substances.

<u>Mild Poisoning</u>	<u>Moderate Poisoning</u>	<u>Severe Poisoning</u>
Anorexia	Nausea	Diarrhea
Headache	Salivation	Pinpoint, non-reactive pupils
Dizziness	Lacrimation	Respiratory difficulty
Weakness	Abdominal cramps	Pulmonary edema
Anxiety	Vomiting	Cyanosis
Tremors of tongue and eyelids	Perspiration	Loss of sphincter control
Miosis	Slow pulse	Convulsions
Impairment of visual acuity	Muscular tremors	Coma
		Heart block

10.1.3 Rabies Prophylaxis. Personnel who handle, or otherwise come into contact with, wild animals on the installation should be required to receive rabies prophylaxis. This may include military police, wildlife biologists, and pest management technicians.

10.2 Hazard Communication. Installation pest management personnel should be given hazard communication training, to include hazardous materials in their workplace. Following initial hazard communication classes, additional training should be given to new employees or when new hazardous materials are introduced into the workplace. A checklist to help you monitor hazard communication training, similar to that used to monitor medical surveillance for pesticide applicators, can be found in Appendix F.

10.3 Material Safety Data Sheets (MSDS). MSDS for all pesticides and other toxic substances used in the pest management program should be made available to pest management personnel and to those who may come in contact with pesticides (e.g., fire fighters, spill response personnel, employees at the post-exchange and commissary who work in the pesticide sales area). A file containing MSDS for all pesticides on the installation should be maintained at the IPMC office. Additionally, MSDS should be kept in each facility where pesticides are stored or handled. This may include the public works pest control shop, the golf course maintenance facility, the post-exchange, commissary, and veterinary clinic. Copies of MSDS should also be kept on each pest control vehicle for pesticides used that day. For copies of pesticide MSDS or labels, contact the DoD pesticide hotline at DSN 584-3773; commercial: 410-436-3773.

10.4 Personal Protective Equipment. Approved masks, respirators, chemical resistant gloves and boots, and protective clothing (as specified by applicable laws, regulations and/or the pesticide label) should be provided to pesticide applicators and QAEs by the government or the contractor, as applicable. These items should be used as required during the mixing and application of pesticides. Pesticide-contaminated protective clothing should not be laundered at home, but should be laundered commercially. Severely contaminated clothing should not be laundered, but should be considered a pesticide-related waste and disposed of in accordance with current environmental office requirements. Evaluation of the proper use and maintenance of personal protective equipment is usually performed by post safety and industrial hygiene personnel. For information on personal protective equipment, consult the Armed Forces Pest Management Board's TG 14, Personal Protective Equipment for Pest Management Personnel.

10.5 Fire Protection. The pest management coordinator should provide floor plans for pesticide storage facilities to the fire department, either directly or indirectly through facility personnel. In addition, pesticide inventories should be sent to the fire department every six months. The Fire Chief will determine, based on his pre-fire plan, which fire control efforts to employ depending on the size and type of fire at the time a fire call is reported. A copy of all pre-fire plans, along with maps and other information relating to fire control at pesticide storage facilities, should be maintained by the IPMC. (For additional information, see the Armed Forces Pest Management Board's TG 16, Pesticide Fires: Prevention, Control & Cleanup).

10.6 Pest Control Vehicles. Pest control vehicles should be outfitted with utility beds having external lockable storage compartments. If this can not be done, then external lockable boxes or other enclosures should be mounted in the bed. At no time will pesticides be permitted in the

cab or other passenger compartments of vehicles. Vehicles used for pest control purposes should not be used to transport other people or equipment. Care should be taken to secure pesticides to prevent damage to the containers and spillage of the chemicals. At no time should pesticides be left unsecured in the vehicles when unattended. A portable eye lavage and spill kit should be carried in each pest control vehicle when in use.

CHAPTER 11

ENVIRONMENTAL CONSIDERATIONS

11.1 General Considerations. DoD Instruction 4150.7, DoD Pest Management Program, and Army Regulation 200-5, Pest Management, describe DoD and Army policy concerning environmental considerations for pest management operations and pesticide applications. The following paragraphs provide an overview of areas of concern.

11.2 Pesticide Application Outdoors. Pesticides should not be applied outdoors when the wind speed exceeds five miles per hour or according to the label requirements. Whenever pesticides are applied outdoors, care should be taken to ensure spray drift is kept away from individuals and other not target organisms (plants and animals), including the applicator.

11.3 Sensitive Areas. Environmentally sensitive areas on the installation near application sites, and those sensitive areas listed on pesticide labels, should be considered before pest control operations are conducted. No pesticide should be applied directly to wetlands or water areas (lakes, rivers, etc.) unless use in such sites is specifically approved on the label, and the proposed application is approved by the environmental office.

11.3.1 Child Development Centers and Hospitals. Special care should be given when pesticides are applied in the child development center, in patient areas of the hospital or health clinic, or in Family quarters where infants are present. Pesticide label instructions and guidance provided in the [AFPMB Technical Guide 20, Pest Management Operations in Medical Treatment Facilities](#) should be followed for these situations.

11.4 Endangered/Protected Species and Critical Habitats. Protected migratory birds that periodically occur on an installation cannot be controlled without a permit. Endangered or threatened animal species may also occur on your installation. The IPMC should periodically evaluate ongoing pest control operations and evaluate all new pest control operations to ensure compliance with the Endangered Species Act. This can best be done through coordination with pest management personnel and the environmental office. The pest management plan may be a good source for information on protected, endangered, or threatened species. No pest management operations should be conducted that are likely to have a negative impact on endangered or protected species or their habitats without prior approval from the major command pest management consultant.

11.5 Environmental Documentation. AR 200-5 requires the IPMP be covered by the installation's National Environmental Policy Act (NEPA) requirements and the installation's master planning process. It is important for the IPMC to coordinate installation pest management activities with the natural resources manager in an effort to determine the need for an EA or EIS. The IPMC should have a copy of the applicable NEPA assessment on file located in the environmental office.

11.6 Pesticide Spills and Remediation. A pesticide spill cleanup kit should be maintained in each pesticide storage area on the installation. This includes a spill kit at the post-exchange and

the commissary. Pesticide spill cleanup procedures, notification procedures, and a list of components of the spill kit should be outlined in the installation pest management plan. A spill cleanup kit should be kept on each pest control vehicle. Additional information on pesticide spills can be found in [AFPMB Technical Guide 15, Pesticide Spill Prevention and Management](#). All pesticide spills should be reported to the installation hazardous waste manager.

11.7 Pollution Control/Abatement Projects. The IPMC should be aware of any pollution control or abatement projects on the installation which deal with pesticides.

11.8 Pollution Prevention (P2). The pest management program, as outlined in the pest management plan, should comply, whenever applicable, with Executive Order 12856 of August 3, 1993, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements. The control of pests with pesticides should be considered only after nonchemical control methods have been exhausted. Integrated pest management strategies that stress nonchemical control should form the basic foundation of the pest management program.

11.9 Prohibited Pesticide Applications.

- a. Do not use a pesticide in any manner that is inconsistent with its label.
- b. Do not use a pesticide which registration has been suspended or canceled by the EPA or the state in which the installation is located.
- c. The use of herbicides to control weeds at the Child Development Center or in areas where children play is prohibited.

11.10 Aerial Pesticide Applications. Because aerial applications are specialized operations that may pose a higher risk for drift and impacts to non-target species, aerial applications require special approval procedures prior to beginning the aerial operation. The installation staff should prepare an Aerial Spray Statement of Need (ASSON) for approval by their designated pest management consultant (DoD certified in category 11). The ASSON is a formal document prepared by installation personnel and approved by the designated pest management consultant with certification in aerial application.

11.10.1 Project Approval Process. The aerial spray project approval process includes the following steps:

1. Installation personnel identify the potential for using aerial application of pesticides to control problem pests.
2. Installation personnel draft an ASSON and send the ASSON to their designated pest management consultant certified in aerial application. The designated pest management consultant can provide the recommended format for the ASSON.
3. The designated pest management consultant, certified in aerial application, reviews the ASSON.

4. If, after review of the ASSON, the consultant determines that the proposed project is justified, preparation of the appropriate environmental documentation begins.

5. The installation commander forwards the ASSON and environmental documentation to the appropriate approval authority (USAEC or designated pest management consultant).

6. The approval authority sends written project approval or disapproval back to the requesting installation. NOTE: The approval authority will coordinate disease vector control projects with MEDCOM.

7. Once a project is approved, it can continue until changes in the pesticide, application rate, or the spray area are needed; or environmental considerations require reexamination of the project.

8. If a reexamination is performed with appropriate changes justified in the ASSON and environmental documentation, the project can be resubmitted for approval.

CHAPTER 12

SELF-HELP PEST CONTROL PROGRAM

12.1 Program Description. Self-help pest control is a program where occupants of military housing units, unaccompanied enlisted and officer quarters, and other facilities, including those at very small and/or remote sites, under that care of a building manager, can obtain and use various pest management products to control pests in their quarters. At some installations, self-help materials may also be given out to personnel who work in offices, warehouses, or other administrative buildings. Self-help pest control is designed to allow occupants the opportunity to control pests in their buildings.

Appendix D provides a link for the current Department of the Army policy (DAIM-ED Memorandum 04 Jan 2007) on the self-help pest management program for military housing (MH) occupants and building managers. The policy includes a list of pesticides and pest control items authorized for issue in self-help programs. Requests to use products not on this list will be submitted through the IPMC to the designated pest management consultant for review and approval. The policy states that troop labor will not be used to augment DPW pest management operations as a self-help operation

12.2 Self Help Products. Self-help pest control items are usually given out through the installation's self-help store by the self-help store manager. On smaller installations where the low number of Family housing units does not warrant a separate self-help facility, the housing manager or local pest management technician may provide the pest control items directly to the occupants in accordance with the policy in Appendix D. The IPMC should periodically visit the self-help store to coordinate with the self-help store manager, determine if the self-help items being given out are on the authorized list, and ensure that adequate records of issue are maintained

12.3 Records and Reports. The self-help store manager or the person responsible for distributing self-help materials will maintain written records of pesticides dispensed using DD Form 1532-1, Pest Management Maintenance Record, or other forms compatible for use with electronic pesticide use tracking systems. For the DoD Measures of Merit, self-help personnel are required to provide IPMC with all self-help pesticide data.

12.4 Training. Family housing residents must be instructed in the proper use of pest control self-help items before the items are issued. This is usually accomplished at the self-help orientation given by self-help personnel to new customers. For assistance with self help training please, contact USAEC or your designated DoD PMC.

CHAPTER 13

PEST MANAGEMENT CONTRACTS

13.1 General. Contracts are often used as a vehicle to obtain pest management services on Army installations. Additionally, installations may contract for special pest management services (e.g. termite treatment, fumigation, or large vegetation control project) to supplement an in-house workforce. In many instances, the entire in-house pest management operation may now be performed by contractors.

13.2 Requirements. All contracts dealing with pest management will be reviewed for technical content and approved by the designated DoD-certified pest management consultant. All contracts must be sent to the respective designated pest management consultant prior to submission for bids or completion of purchase orders. For those contracts that are renewed annually, the consultant will be notified of the upcoming renewal date and advised if any changes in the contract specifications have changed. Exception to this policy will be the need for emergency pest control services. In this case, the consultant should be contacted by phone or email for verbal approval. A copy of each pest control contract and the supporting quality assurance surveillance plan should be on file in the IPMC's office.

13.3 Formal Pest Control Contracts. There are several methods the Army uses to contract pest control services on the installation and several different types of contracts. Pest management specifications with broad scope are usually prepared by the activity (e.g., public works) and solicited through the installation's contracting office.

13.3.1 Base Operations Contracts (BASEOPS). Most Army installations use total (base) maintenance contracts which include the pest control function. The BASEOPS contractor can either hire their own applicators or sub the work to a commercial pest control company. The BASEOPS contractor is still responsible for the performance of work regardless of who is performing the work. Under a BASEOPS-type contract contractors perform most or all of the public works functions on the installation. The pest controllers may be part of the prime contractor's staff that work out of government buildings and operate much the same as an in-house pest controller operation operates. A variation of that theme is when the pest management work is subcontracted. In this case, the pest controllers may work full or part time out of government buildings or they may travel on and off the installation on a daily basis, not utilizing any government buildings for pesticide storage and mixing (not recommended). In either case, it is important to recognize that the pest controllers work for the contractor, not directly for the government. Any changes in the pest management program that involve the contractor must first be directed to the government's Contracting Officer's Representative (COR) or Pest Management Quality Assurance Evaluator (PMQAE) who monitors that contract. Pest controllers should never be directed to do work without first consulting with the COR/PMQAE.

13.3.2 Stand Alone Contracts. The other method for contracting pest management services is commonly referred to as "stand alone contracts". The public works directorate may contract for pest management as a service separate from the other base-ops work. In this case, the contractor is usually selected from the local community and drives on and off the installation

on a daily basis in response to the work specifications in the contract. Under these circumstances, pesticide storage and mixing functions are provided by the contractor off the installation, not on government property.

Management, through the installation contracting office, solicits bids from local licensed pest control companies to either supplement pest control services provided in-house or replace the in-house staff. Most pest control contracts are either firm fixed price (FFP) or a combination FFP and requirements contract. The FFP portion spells out recurring work to be performed (i.e. weekly or monthly surveillance, weed control, etc) while the requirements portion covers on call services (i.e., nuisance pest control). The performance work statement (PWS) defines the government's work requirements and usually establishes control standards for acceptable levels of performance.

13.4 Micro-Procurement or Unsolicited Pest Control. Some installation pest management services are procured using a credit card (IMPAC card). For guidance and the regulations pertaining to this process, contact your pest management consultant.

13.5 Augmentation Contracts. Augmentation contracts are simple one time specialty contracts for operations such as termite treatment or fumigation that supplement the in-house workforce when time, materials, or expertise are best served by trained and certified experts. The pest control company will come on the installation only to perform this work. The work performed is usually overseen by the IPMC or PMQAE.

CHAPTER 14

POINTS OF CONTACT

The resources listed below are designed to help you obtain pest management or related information to aid in your understanding your pest management program. While this listing is not all-inclusive, it represents those agencies most commonly used when answers to pest management questions cannot be answered at the installation level.

Aerial Application of Pesticides

U.S. Air Force Reserve

910 AW/DOS - 3976 King Grave Road, YNG-WRN RGL ARPT, ARS
Vienna, OH 44473-0910

Phone: DSN 346-1412 or (330) 609-1412.

FAX: DSN 346-1616 or (330) 609-1616

E-Mail: KARL.HAAGSMA@YOUNGSTOWN.AF.MIL.

Web site: <http://w3.afrc.af.mil/units/910aw/spray/dod.af.htm>
<http://w3.afrc.af.mil/units/910aw/spray/index.htm>

Chemical Emergencies

For assistance in a chemical emergency involving a spill, leak, or exposure call:

- CHEMTREC; Emergency: (800) 424-9300
- National Response Center for Pollution, Toxic Chemical & Oil Spills: (800) 424-8802
- National Pesticides Telecommunications Network: Up-to-date technical reference material on toxicity, human and environmental health effects, disposal, and proper use of each pesticide. (800) 858-7378

Disease Threats Due to Arthropods

CDC, Division of Vector-Borne Infectious Diseases, Fort Collins, Colorado.
(303) 221-6452/6477

<http://www.cdc.gov/ncidod/dvbid/index.htm>

State Mosquito Control: Look in the “State Government” section of your telephone book (Blue Pages). Often found under “Agriculture Department,” “Environmental Department,” “Health Department,” or sometimes “Sanitation Department.”

State, County Health Departments: Look under “Health Department” in the State, County Government pages of your telephone book (Blue Pages).

U.S. Army Center for Health Promotion and Preventive Medicine: Fact Sheets.
<http://usachppm.apgea.army.mil/HIOFS/>

U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM)

- USACHPPM-Main, Aberdeen Proving Ground, MD: (410) 436-3613, DSN 584-3616.
- USACHPPM-West, Fort Lewis, WA: (253) 966-0084, DSN 347-0084.
- USACHPPM-North, Fort George G. Meade, MD: (301) 677-3644, DSN 622-3644.
- USACHPPM-South, Fort McPherson, GA: (404) 464-2564, DSN 367-2564.

Environmental Issues, Pesticides and Pest Management

Army Environmental Command (USAEC)

Senior Pest Management Consultant

ATTN: IMAE-EQP, Bldg E4435

Aberdeen Proving Ground, MD 21010-5401

(410) 436-1214, DSN 584-1214

FAX (410) 671-1675.

EPA, Office of Pesticide Programs

401 M. Street, S.W., Washington, D.C. 20460

- Insecticide-Rodenticide Branch: (703) 305-5300.
- Fungicide-Herbicide Branch: (703) 305-6250.

Hazard Communication

OSHA, <http://www.osha.gov/SLTC/hazardcommunications/index.html>.

Literature, Pest Management

Armed Forces Pest Management Board

Defense Pest Management Information Analysis Center (DPMIAC)

(301) 295-8305, DSN 295-8305

FAX: DSN 295-7473

<http://www.afpmb.org/mission/dpmiacstatement.htm>.

Government Printing Office

Washington, D.C.,

<http://www.gpoaccess.gov>.

Least Toxic Methods, Pest Management

Bio-Integral Resource Center (BIRC)

P.O. Box 7414, Berkeley, CA, 94707

(510) 524-2567

<http://www.birc.org>.

Policy, DoD Pest Management

Army Environmental Command (USAEC)

Senior Pest Management Consultant

ATTN: IMAE-EQP, Bldg E4435

Aberdeen Proving Ground, MD 21010-5401

(410) 436-1214, DSN 584-1214

FAX (410) 671-1675.

Armed Forces Pest Management Board

Forest Glen Section, Walter Reed Army Medical Center, Washington, D.C. 20307-5001

Executive Director: (301) 295-7476, DSN 295-7476

FAX: (301) 295-7473

<http://www.afpmb.org/index.htm>.

Pest Identification

U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM)

- USACHPPM-West, Fort Lewis, WA: (253) 966-0084, DSN 347-0084.
- USACHPPM-North, Fort George G. Meade, MD: (301) 677-3644, DSN 622-3644.
- USACHPPM-South, Fort McPherson, GA: (404) 464-2564, DSN 367-2564.

Extension Service

Look in the “County Government” section of your telephone book (Blue Pages) usually under “Extension Service” or “Agricultural Extension Service.”

Pesticide Information/Advice

DoD Pesticide Hotline: (410) 436-3773, DSN 584-3773

FAX: (410) 436-2037

e-mail: pesticide.hotline@apg.amedd.army.mil

Pesticide Poisoning

- a. Human: Local Poison Control Center _____.
- b. Animal: State Veterinarian _____ (this point of contact can usually be obtained by calling the State Health Department).

Regulatory Requirements, Pesticides

- a. State Pesticide Regulators:
http://www.epa.gov/pesticides/regulating/disposal_contacts.htm

- b. USACHPPM Pesticide Hotline:
(410) 436-3773, DSN 584-3773
FAX: (410) 436-2037
e-mail: pesticide.hotline@apg.amedd.army.mil

Training, Pest Management:

Army Sponsored Courses – CONUS

- Pest Management Certification Course (6H-F12/322-F12)
- Recertification Course (6H-F13/322-F13),
- Preventive Medicine Specialist Course (322-91S10), and
- DoD Pest Management Quality Assurance Evaluator Course (6H-F33/322-F31)

Contact:

Academy of Health Sciences, U.S. Army
ATTN: MCCS-HPM, Fort Sam Houston, TX 78234-6100
(210) 221-6833, DSN 471-6833

Classes are conducted at Fort Sam Houston, TX. Scheduling for the classes above can be found at the following Web site: <http://www.cs.amedd.army.mil/dphs/MedZoo/courses.htm>

Army Sponsored Courses – OCONUS

Contact:

USACHPPM-EUR, CMR 402, APO AE 09180
Tel: 49-6371-86-8540/44, DSN: 486-8544

Classes are conducted at the USACHPPM-EUR, Landstuhl, Germany.

State Pesticide Regulators Workshops

Look in the “State Government” section of your local area telephone book for the Pesticide Regulation Office, usually under “Department of Agriculture” or “Consumer/Regulatory Affairs” or “Environmental Office.”

Extension Service

Look in the “County Government” section of your telephone book (Blue Pages) usually under “Extension Service” or “Agricultural Extension Service.”

CHAPTER 15

PEST MANAGEMENT REFERENCES

15.1 Laws, Regulations and Instructions. Because all pesticides are toxic to some degree and can have an impact on human health and the environment, the federal government, states, DoD and the Army have established laws, instructions, and regulations to govern their use. The IPMC should be knowledgeable of these laws, instructions, and regulations. Additionally, the IPMC may want to keep a book of all pesticide labels and MSDS on-hand for reference.

15.2 Resources. Technical information related to pest management is available from many sources. The DoD and Department of Army have produced guides and manuals specifically relating to pest management on military installations. Manuals, handbooks, keys, guides, periodicals, and trade journals that address topics such as arthropod and weed pest identification, pesticide use, non-chemical control measures, new and innovative methods for managing pests are also available from various sources and should be consulted by the IPMC.

This guide provides a comprehensive list in Appendix J of primary references of use to IPMCS. The IPMC should know where these documents can be obtained from respective offices on the installation. A copy of those references identified with an asterisk (*) in Appendix J should be kept on-hand by the IPMC (either in hard copy or electronic format).

15.2.1 AFPMB. The Armed Forces Pest Management Board's Defense Pest Management Information Analysis Center (DPMIAC) can be helpful in providing information (literature reviews, article reprints) on specific pest management topics.

CHAPTER 16

FREQUENTLY ASKED QUESTIONS

The questions found below are frequently asked at the installation level and are often forwarded to USAEC or the designated pest management consultant for answers. The answers to the questions below are based on Army, federal, and/or state laws, regulations and guidelines. This section does not address all of the questions that may be sent to the IPMC, but these questions are often the most confusing, especially to those individuals who do not regularly deal with regulatory issues in pest management.

1. Some commercial pest controllers working off of the installation do not have to be certified to apply pesticides, so why do they have to be certified to apply pesticides on Army installations?

Answer: DoD 4150.7-P requires all contract pesticide applicators to be appropriately state-certified. The EPA has approved the DoD Plan which allows DoD to act as a 51st state and hence anyone applying pesticides on DoD property must comply with the DoD pesticide applicator certification requirements. Similarly, pesticide applicators certified in one state can not legally apply pesticides in another state without meeting each state's pesticide applicator certification requirements.

2. Our Family housing has been privatized so why do we still have a self-help program?

Answer: Self-help programs permit uncertified personnel to perform limited pest management operations. While the Army has established self-help programs for Family housing, there are other situations on the installations where self-help is applicable. Examples are the use of wasp-freeze insect spray by utility workers and the use of certain products in office buildings. Information on Army installation self-help programs can be found on the [USAEC Web site](#). Contact your pest management consultant for more detailed information.

3. I can buy many pesticides at local stores in my community and use them at my home. Why can't I use these pesticides at my government workplace?

Answer: EPA and the states allow private individuals to buy pesticides that are not Restricted Use and apply them on their own property. However, the states do not allow an individual to apply these same pesticides on their neighbor's land without state certification and licensing. This same rationale applies in the Army because pesticide application around the workplace constitutes work by a third party, much like the situation of application at the neighbor's house mentioned above. Regardless of the pesticide used, this restriction is also in place to prevent legal liability from the misuse of the pesticide.

4. The pest controller is using a pesticide to control ants around the foundation of buildings on the installation, but ants are not listed on the label. Is this a legal pesticide application?

Answer: Yes. Only the site, in this case building foundations, must be listed on the label. Application of this pesticide at any site on the label is legal and can be used to control any pests found at those sites as long as the application is not specifically prohibited.

5. Why aren't the stringent storage requirements for the pest control shop enforced at the Post-Exchange pesticide sales section.

Answer: There are differences in the quantities, toxicities, and formulations of pesticides stored in the pest control shop and the Post-Exchange. Also, the pesticides at the pest control shop are operational in nature and are taken to a mixing area, opened and dispensed, and then returned to the storage area. The pesticides sold at the Post-Exchange are retail commodities that are never opened and returned, and are transported to a private residence for subsequent storage and use.

6. My friend who lives off post has the local pest control company treat her house once a month. Why can't I do that in my government quarters?

Answer: The Army prohibits military housing residents or building occupants from privately contracting on their own pest control services in government owned buildings or on government property.

7. Some of the buildings that require pesticide application do not want to close down so the pesticide applicator can treat with pesticides. Can't he apply pesticides when people are in the building?

Answer: With few exceptions, pesticides must be applied when only properly protected pesticide applicators are the only individuals inside the facility. Most pesticide labels state the precaution to not breathe the vapors of the product – this includes all personnel who are not wearing a respirator. It is not practical or feasible for a variety of reasons to issue respirators to building personnel to circumvent the requirement for their absence during pesticide applications. In addition, application of pesticides in a building occupied by workers or office personnel can lead to anxiety and attribution of illness by those who think they will be harmed by the chemicals. Examples of exceptions to the requirement for people to be out of a building being treated are the placement of enclosed bait stations for ants and cockroaches.

8. Why can't we use herbicides to control weeds at the Child Development Center?

Answer: Paragraph 5-38n, AR 680-10, Child Development Services, states: "Weed control in children's play areas will not include the use of herbicides." This practice is also reinforced by the "IPM Star" program promoted by Department of Army to protect children to the maximum extent possible from toxic materials in the environment. Physical and mechanical methods (cutting) are the preferred methods to remove unwanted vegetation.

9. The pest controllers are using an herbicide at half the recommended strength listed on the pesticide label. They are getting good control, but don't they have to follow the label exactly as it is written?

Answer: The percentage or rate of application listed on the pesticide label is the maximum amount of chemical permitted by EPA. However, the label does not prohibit application of a lesser amount of pesticide. As long as good control is achieved, using a lesser rate saves money and reduces environmental risks. The only exception is for termite control, where the maximum rate must be used at all times.

10. Is the RCI housing contractor required to provide pesticide use data to the government?

Answer: RCI, as a lessee, is subject only to requirements stated in the ground lease or other agreements set between parties. DoDI 4150.7 and AR 200-5 do not apply to DoD land included in the leasehold. Therefore, unless the grounds lease includes a requirement for providing pesticide use data, RCI is not required to do so. The partner may provide this information upon request; however it is at their own discretion. Information on RCI can be found in the memorandum entitled "[Applicability of Pest Management Regulations to RCI property](#)".

11. Our pest control contractor keeps records of pesticides applied in accordance with the State regulations in which he is certified. Is this information sufficient for government purposes?

Answer: No. All pesticides applied in government buildings must be recorded on DD Form 1532-1 or equivalent method of recordkeeping. Although similar information to what is required may be recorded on the pest controller's work order, the required information still needs to be recorded on the 1532-1 or a equivalent method of recordkeeping (e.g., computer program) that provides pest management operations information such as surveillance and pesticide application information by specific building and date. See Chapter 5 of this guide for further information.

12. Are pest applicators always required to wear respirators each time they are applying pesticides?

Answer: Not necessarily. Pesticide labels may require the applicator to wear a respirator, but the label may default to a statement that says "Do not breathe the vapors." In these two instances, a respirator is required. But, if the label does not require a respirator or have a warning not to breathe the vapors, then no respirator is required. This situation may be encountered with the pest controller is placing ant and cockroach bait stations or using anticoagulant rodenticides. The Material Safety Data Sheet (MSDS) provides additional information on required personal protective equipment.

APPENDIX A

POSSIBLE PEST MANAGEMENT FUNCTIONAL AREAS

<u>Pest Surveillance</u>	<u>Pest Control</u>	<u>Pesticide Storage</u>	<u>Sales/Distribution</u>
Preventive Medicine	Public Works Buildings and Structures	Public Works Buildings and Structures	Veterinary Clinic (pet care products)
Veterinary Service	Public Works Roads and Grounds	Self Service Supply Center (SSSC)	Self Service Supply Center (SSSC)
Public Works Buildings and Structures	Veterinary Clinic (tick and flea control)	Veterinary Clinic (pet care products)	Commissary
Public Works Roads and Grounds	Military Police (stray animals)	Defense Reutilization and Marketing Office (DRMO)	Military Exchange (especially Garden Center)
Golf Course	Agricultural Lessee	Golf Course	Family Housing Self-Help
Contract Pest Control	Contract Pest Control	Family Housing Self-Help	
Military Police	Golf Course	Athletic Field Maintenance	

APPENDIX B

PERSONNEL INVOLVED WITH INSTALLATION PEST MANAGEMENT

The following personnel may be involved, either directly or indirectly, with pest management at the installation:

1. Buildings and Structures pest management technicians.
2. Roads and Grounds pest management technicians.
3. Agronomist.
4. Installation pest management coordinator.
5. Golf course superintendent and golf course applicators.
6. Contract pesticide applicators.
7. The public works quality assurance evaluator for pest management.
8. Family housing self-help store personnel.
9. Preventive Medicine Specialists.
10. Veterinary food inspectors
11. Integrated Training Area Management (ITAM) personnel.
12. Natural Resources Manager
13. Cultural Resources Manager

APPENDIX C

CHECKLIST FOR PEST MANAGEMENT COORDINATION

<u>ACTIVITY</u>	<u>FREQUENCY*</u>	<u>DATE LAST CONTACTED</u>
<u>Preventive Medicine</u>	Quarterly	_____
Bldg No _____		_____
Phone _____		_____
POC _____		_____
<u>Industrial Hygiene</u>	Quarterly	_____
Bldg No _____		_____
Phone _____		_____
POC _____		_____
<u>Veterinary Service</u>	Quarterly	_____
Bldg No _____		_____
Phone _____		_____
POC _____		_____
<u>Occupational Health</u>	Quarterly	_____
Bldg No _____		_____
Phone _____		_____
POC _____		_____
<u>Post Safety Office</u>	Quarterly	_____
Bldg No _____		_____
Phone _____		_____
POC _____		_____
<u>Environmental Office</u>	Quarterly	_____
Bldg No _____		_____
Phone _____		_____
POC _____		_____
<u>Public Works Pest Control</u>	Quarterly	_____
Bldg No _____		_____
Phone _____		_____
POC _____		_____

ACTIVITY	FREQUENCY*	DATE LAST CONTACTED
<u>Golf Course Pest Control</u> Bldg No _____ Phone _____ POC _____	Quarterly	_____ _____ _____
<u>Self-Help Center</u> Bldg No _____ Phone _____ POC _____	Quarterly	_____ _____ _____
<u>Fire Department</u> Bldg No _____ Phone _____ POC _____	Semi-annually	_____ _____
<u>Veterinary Clinic (Pesticide Sales)</u> Bldg No _____ Phone _____ POC _____	Semi-annually	_____ _____
<u>Military Exchange (Pesticide Sales)</u> Bldg No _____ Phone _____ POC _____	Semi-annually	_____ _____
<u>Commissary (Pesticide Sales)</u> Bldg No _____ Phone _____ POC _____	Semi-annually	_____ _____
<u>Self Service Supply Center</u> (Pesticide Distribution) Bldg No _____ Phone _____ POC _____	Semi-annually	_____ _____
<u>DRMO</u> Bldg No _____ Phone _____ POC _____	Semi-annually	_____ _____

ACTIVITY	FREQUENCY*	DATE LAST CONTACTED
<u>Corps of Engineer</u> (local or district office) Bldg No _____ Phone _____ POC _____	Semi-annually	_____ _____
<u>USAEC Pest Management Consultant</u> Phone _____ POC _____	As needed	_____ _____
_____ Bldg No _____ Phone _____ POC _____	_____	_____ _____ _____
_____ Bldg No _____ Phone _____ POC _____	_____	_____ _____ _____
_____ Bldg No _____ Phone _____ POC _____	_____	_____ _____ _____
_____ Bldg No _____ Phone _____ POC _____	_____	_____ _____ _____
_____ Bldg No _____ Phone _____ POC _____	_____	_____ _____ _____
_____ Bldg No _____ Phone _____ POC _____	_____	_____ _____ _____

* The listed frequencies are suggested frequencies for coordination; these frequencies should be modified for the circumstances for each installation.

APPENDIX D

SELF-HELP MANAGEMENT PROGRAM FOR MILITARY HOUSING (MH) OCCUPANTS AND BUILDING MANAGERS

The Self-Help Pest Management Program for Military Housing (MH) Occupants and Building Managers (DAIM-ED Memorandum 04 Jan 2007) is available at the USAEC pest management Web site at <http://aec.army.mil/usaec/pest/selfhelp.pdf>.

APPENDIX E

CHECKLIST FOR MONITORING MEDICAL SURVEILLANCE OF PESTICIDE APPLICATORS

<u>Name</u>	<u>Command/Activity</u>	<u>Last Exam</u>

APPENDIX F

**CHECKLIST FOR MONITORING PESTICIDE APPLICATOR HAZARD
COMMUNICATION TRAINING**

<u>Name</u>	<u>Activity/Command</u>	<u>HAZCOM Training Date</u>

APPENDIX G

CHECKLIST FOR MONITORING PESTICIDE APPLICATOR CERTIFICATIONS

<u>Name</u>	<u>Certification Categories</u>	<u>Certification Exp. Date</u>

APPENDIX H

INSTRUCTIONS FOR THE USE OF THE PEST MANAGEMENT MAINTENANCE RECORD AND PEST CONTROL REPORT (DD FORM 1532-1 & DD FORM 1532)

General Information

1. The Pest Management Maintenance Record (DD Form 1532-1) provides a standard method for recording pest management operations including surveillance activities, pesticide use and other pest control information at an installation. Use of this record complies in part with Federal Regulation 40 CFR 171.11 (c) (7) of the Federal Insecticide, Fungicide and Rodenticide Act, as amended. It is used as a permanent maintenance record and history of pest control operations at a particular site (structure or area). The record also provides continuity in the management and performance of pest control operations at the installation level. Use and analysis of these records can assist in identifying structures, designs and areas which have significantly more pest problems than others. Historical pest control data can also be used to verify warranties, correlate sites and treatment, and to facilitate analyses for cost effective pest management.
2. When pest control operations are accomplished for a structure or an area, the applicator should record required information on the record form and file the pest management maintenance record for future use. The information from the DD Forms 1532-1 should be compiled monthly on a Pest Control Report DD Form 1532 by the IPMC. These records are archived after 2 years and maintained at the installation indefinitely.
3. A comprehensive review of these records should be scheduled annually and in conjunction with on-site visits by the designated pest management consultant. Information on pest infestation treatment frequencies and pesticide application trends gained from this analysis can then be used by the IPMC to adjust and improve the installation's pest management plan and operations. Annually the IPMC should submit the installation's total for pounds or active ingredients to their designated pest management consultant or USAEC for the DoD Measure of Merit No. 2.
4. Contact your pest management consultant for more information on 1532s.

Data Entry on DD Form 1532-1

1. On the top of the record, in the space marked "Bldg/Area", enter the building or structure number when a maintenance record is needed. This number may be found on the installation in the facilities inventory, usually available from public works. Similarly, for outdoor areas to be maintained on record, enter a description or area number, if available. In the next space enter the size of the item to be maintained. A legend at the bottom of the record provides standard measurement units. In the space marked "Type of Construction", enter the code letters from the legend to designate the major type of construction. More than one set of code letters may be

used, if desired. In the last space marked "Use Designation", enter information to identify the major use of the building, structure or area.

2. Enter the following information for each pest control operation conducted at the structure or area.
 - a. **Date**. Enter the date of the operation in the date column as year, month, and day.
 - b. **Units Serviced and Work Origin**. Enter the part of the building involved, such as room, apartment number, etc., or in the case of outdoor areas, a site designation such as "south section of parade ground," "trees," etc. Enter also the work origin using the symbols in the legend to show how the work was initiated.
 - c. **Units of Measure**. Enter the size of the treated or protected area using the measurement units in the legend.
 - d. **Target Pest**. Enter the name of the target pest. Be specific, if possible.
 - e. **Control Operation**. Enter information to identify how the control operation was performed (surveillance, misting, hand spraying, fogging, trapping, etc.).
 - f. **Pesticide use**. If pesticide was used, enter the pesticide name and EPA registration number in the first space, enter the concentration of the finished formulation in the middle space, and the amount or quantity used in the last space. If no pesticide was used, leave this section blank.
 - g. **Labor Time**. Enter the time required for the pest control operation in this space. Include all time associated with the job, for example: travel preparation, execution and cleanup. Do not include the pretreatment inspection or post-treatment survey.
 - h. **Application Initials**. Enter the initials of the individual responsible for performing the work. If more than one person was involved, the crew leader should initial the record.
 - i. **Remarks**. Using the date as a cross reference, enter any remarks in this space which pertain to a pest control operation reported on the record. If a diagram of areas treated is desired, it may be put in this space or put on a separate card and attached to the record.

APPENDIX I

GUIDANCE FOR CALCULATING AND REPORTING DOD MEASURE OF MERIT #2

Worksheet: How to Calculate Pesticide Use (in PAI) from DoD Records and other Data

First compute Fiscal Year totals for each pesticide in the units (e.g., gallons) used on your reports. You will then need to make only one calculation to convert this figure into the PAI format for the pesticide for the year.

If a product contains more than one pesticide ingredient, combine and report as a single “combined pesticide” active ingredient PAI.

1. For liquid formulations, (emulsions, suspensions, or solutions) measured in gallons:

a. Multiply the number of gallons of undiluted pesticide used by the “pounds ingredient per gallon” figure on the pesticide label; if the pesticide label does not contain this information, then multiply the number of undiluted gallons by the percent active ingredient figure on the label and then multiply this subtotal by 8.34 (pounds per gallon); or

b. Multiply the number of diluted gallons used by the percent final concentration, and then multiply again by the “pounds ingredient per gallon” figure on the pesticide label. If the pesticide label does not contain this information, then multiply this subtotal by 8.34 (pounds per gallon).

2. For liquid formulations (emulsions, suspensions, or solutions) measured in fluid ounces:

Convert fluid ounces to gallons by dividing fluid ounce totals by 128 (1 gallon=128 fluid ounces); then use the formulas described above to calculate PAI.

3. For dry formulations (dusts, granules, fertilizer mixtures) measured in pounds:

Multiply the total amount of pounds of product by the percentage of active pesticide ingredient.

4. For dry formulations (dusts, granules, aerosols) measured in dram ounces:

Multiply the total amount of pesticide in dry ounces by the percentage of active ingredient. Then divide by 16 dram ounces per pound.

5. For any formulation measured for unit area applications:

Convert the amount of pesticide per unit area into pounds of active ingredient as specified above and multiply by the number of area units to which the pesticide was applied.

6. Remember to divide percentages found on pesticide labels by 100 before making calculations (e.g. 10% = 0.10).

For ant, cockroach and rodent bait stations (with factory mixed pesticide-baits) report only the total number of units used by brand name.

APPENDIX J

PEST MANAGEMENT REFERENCES

The following is a list of federal and state laws, Army regulations, technical manuals, and other references which are relevant to the IPMC's responsibilities. Those marked with an asterisk (*) are of particular importance and should be on-hand with the IPMC.

1. Federal and State Laws.

- a.* The Federal Insecticide, Fungicide and Rodenticide Act (thru PL 100-460, 100-464 to 100-526, and 100-532).
- b. Title 29, Code of Federal Regulations, 2004 (or current) revision, Section 1910, Occupational Safety and Health Standards.

2. DoD Instructions/Regulations.

- a.* DODI 4150.7, DoD Pest Management Program, 22 April 1996.
- b. DOD 4150.7-P, Plan for the Certification of Pesticide Applicators, September 1996
- c. MIL-STD-903C, Sanitary Standards for Commissaries, 20 November 1986.
- d. MIL-STD-904A, Guidelines for Detection, Evaluation and Prevention of Pest Infestation of Subsistence, 13 January 1984.
- e. MIL-STD-909, Sanitation Standards for Food Storage Facilities, 31 August 1989.

3. Army Regulations.

- a. AR 11-34, The Army Respiratory Protection Program, 15 February 1990.
- b.* AR 40-5, Preventive Medicine, 22 July 2005.
- c. AR 40-574, Aerial Dispersal of Pesticides, 26 April 1976.
- d.* AR 200-1, Environmental Protection and Enhancement, February 1997
- e.* AR 200-2, Environmental Effects of Army Actions, 23 December 1988.
- f.* AR 200-3, Natural Resources-Land, Forest and Wildlife Management, Feb 95
- g.* AR 200-4, Cultural Resources Management, Oct 98

- h.* AR 200-5, Pest Management, 29 October 1999.
- g. AR 385-10, The Army Safety Program, 29 February 2000.

4. Technical Manuals.

- a. TM 5-629, Weed Control and Plant Growth Regulation, 24 May 1989.
- b. TM 5-630, Natural Resources, Land Management, July 1982.
- c. TM 5-633, Natural Resources, Fish and Wildlife Management, February 1982.

5. U.S. Army Center for Health Promotion and Preventive Medicine Technical Guides. Additional technical guides can be found at <http://chppm-www.apgea.army.mil/tg.htm>.

- a. TG 138, Guide to Commensal Rodent Control, December 1991.
- b. TG 142, Managing Health Hazards Associated with Bird and Bat Excrement, December 1992.

6. Armed Forces Pest Management Board (AFPMB) Technical Guides

A complete list of technical guides can be found at <http://www.afpmb.org/pubs/tims/tims.htm>.

7. Other References, Manuals, Books and Guides.

- a. Home and Garden Bulletin 64, Subterranean Termites – Their Prevention and Control in Buildings, U.S. Government Printing Office.
- b. Truman's Scientific Guide to Pest Control Operations. 5th Edition. Available through online bookstores on the Internet. Approximate cost, \$89.95.
- c. Mallis Handbook of Pest Control, 9th Edition, available at <http://www.pctonline.com/>, or other online bookstores on the Internet. Approximate cost, \$135.00.
- d. Introduction to the Study of Insects, 7th Edition. Available through online bookstores on the Internet. Approximate cost, starting at \$65.
- e. A Field Guide to the Insects. Borror, D.Z. and R.E. White. 1998. Available through online bookstores on the Internet. Approximate cost, starting at \$19.00.
- f. PCT Technician's Handbook to the Identification and Control of Insect Pests. 1989. 2nd Edition. PCT, 4012 Bridge Ave., Cleveland, OH 44113 (Telephone: 216-961-4130).
- g. NPCA Field Guide to Structural Pests. 1992. Smith, E.H. and R.C Whitman. National

Pest Control Association, Vienna, VA.

8. Periodicals.

- a. The MeisterPro Crop Protection Handbook® (replaces Farm Chemicals Handbook), available through: <http://www.meisterpro.com/mpn/index.php>.
- b. Pest Control (Magazine Published Monthly), <http://www.pestcontrolmag.com/pestcontrol/>.
- c. Pest Control Technology (Magazine Published Monthly), <http://www.pctonline.com/>.
- d. USAEC Timely Topics <http://www.afpmb.org/index.htm>.

APPENDIX K

INTEGRATED PEST MANAGEMENT ANNUAL PLAN UPDATE FORM

The Integrated Pest Management Annual Plan Update Form may be obtained on the USAEC Web site at the following address: <http://aec.army.mil/usaec/pest/pest-puf.doc>.

APPENDIX L

PESTICIDE USE PROPOSAL

The Pesticide Use Proposal worksheet may be obtained on the USAEC Web site at the following address: <http://aec.army.mil/usaec/pest/pest-pup.xls>.

APPENDIX M

SAMPLE IPMC APPOINTMENT LETTER

From: Commanding Officer/Commander, _____
To: _____ (To-Be-Designated Installation Pest Management Coordinator)

SUBJECT: APPOINTMENT OF THE INSTALLATION PEST MANAGEMENT
COORDINATOR

References: (a) DoD Instruction 4150.7-I: Department of Defense Pest Management Program
(b) AR 200-5: Environmental Quality, Pest Management

1. References (a) and (b) require that installation Commanders formally appoint an Installation Pest Management Coordinator (IPMC). By notice of this letter, you are appointed to this position.
2. Your responsibilities are as follows:
 - a. Prepare and staff the Integrated Pest Management Plan (IPMP) and submit the plan and annual updates to the command consultant for review.
 - b. Notify the command consultant of program reviews by non-DoD government agencies.
 - c. Maintain records on the status of PMQAES and pesticide applicators.
 - d. Ensure the completeness and accuracy of installation pest management records and summarize and report pest management information to the command consultant.
 - e. Maintain records of hazardous pesticide disposal actions
 - f. Prepare and coordinate the aerial validation plan for emergency aerial pesticide applications and notify the command consultant of planned regional aerial applications by non-DoD government agencies if these involve the installation.
 - g. Identify and address findings of adverse Safety and Occupational Health reports on the installation pest management operations.
 - h. Notify the command consultant if pest management operations undergo a Commercial Activities review.
 - i. Forward contracts for pest management services to the command consultant for review and maintain records of these contracts.
3. Your appointment and responsibilities, as the (name of installation) IPMC, will continue until formally notified of changes.