

**Armed Forces Pest Management Board  
Technical Guide No. 39**

# **Preparing DoD Pest Control Contracts and Assessing Contract Performance**



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## AFPMB TECHNICAL GUIDES

This is one of a series of Technical Guides (TGs) published by the Information Services Division (ISD), Armed Forces Pest Management Board (AFPMB). The AFPMB is a directorate within the Office of the Deputy Under Secretary of Defense (Energy, Installations and Environment) that recommends policies and procedures, provides guidance, and coordinates the exchange of information related to pest management throughout the Department of Defense (DoD). As a unit of the AFPMB, the ISD collects, stores and disseminates published and unpublished information on arthropod vectors and pests, natural resources, and environmental biology important to the DoD. Other ISD products include country- or region-specific Disease Vector Ecology Profiles (DVEPs). All TGs and DVEPs, as well as ISD's database of over 250,000 accessions on pest management and medical zoology, are available on the AFPMB Web site <http://www.acq.osd.mil/eie/afpmb/products.html>.

TGs are not policy documents, they provide technical guidance for the use of the DoD pest management community and others. Accordingly, TGs should not be construed or referenced as policy. DoD pest management policies may be found in DoD Directive 4715.1E, "Environmental Safety and Occupational Health", DoD Instruction 4150.07, "DoD Pest Management Program," and other DoD directives and instructions, and implementing component directives/instructions/ regulations.

Inquiries, comments or suggestions for improving TGs may be directed to the Chief, ISD, at (301) 295-7476, FAX: (301) 295-7473.

### PURPOSE

This TG provides guidance to personnel preparing and assessing DoD pest management contracts. Contract specification writers should use this TG as a tool to ensure that regulatory requirements are included, Integrated Pest Management (IPM) practices are used, and appropriate pest control standards are met in all pest management contracts. Contract Performance Assessment Representatives (PARs), Quality Assurance Evaluators (QAEs), Contracting Officer Representatives (CORs) or persons serving in these roles, should use this TG as a guide to assess contractor performance and ensure survey and control efforts are effective.

### DISCLAIMER

This TG does not serve as the official authority for procuring or using pesticide equipment listed herein. Use of trade names is solely for the purpose of providing specified information and does not imply endorsement of the products named or criticism of similar ones not mentioned. Mention of trade names does not constitute a guarantee or a warranty of the product by the Armed Forces Pest Management Board (AFPMB), the military departments, or the DoD.

### REFERENCES

- (a) [DoD Instruction 4150.07: DoD Pest Management Program](#)
- (b) [DoD Instruction 4715.1E: Environment, Safety, and Occupational Health \(ESOH\)](#)

- (c) [DoD Guidebook for the Acquisition of Services](#)
- (d) [Unified Facilities Guide Specifications \(UFGS\)](#)
- (e) [Federal Acquisition Regulation \(FAR\)](#)
- (f) [DoD Grants and Agreements \(DoDGARs\)](#)
- (g) [Armed Forces Pest Management Board Technical Guide 24: Contingency Pest Management Guide](#)

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## BACKGROUND

Pest management services are among the many facilities services acquired via contracts, and may be contracted for military installation base operating support, deployments, and contingencies. Pest management is not always one of the most expensive components of installation contracting, but it can be one of the most environmentally sensitive programs. Additionally, pest control services can be time-critical and difficult to measure.

Services maintain pest control contract templates which can be used as the basis for new contracts. However, these templates must be reviewed periodically to ensure they are up-to-date, and the resulting contract must be specifically tailored to meet the needs of the installation or military operation. DoD pest control contracts are usually performance-based, meaning that the contractor is given the final intended result and how it will be measured, but is not given specific procedures to achieve the required result. This methodology rewards efficient and innovative contractors, but also requires oversight to ensure activities are both legal and safe. In accordance with DoDI 4150.07 (ref a), the Pest Management Consultant (PMC) assists with writing and reviewing pest management contracts. The PMC reviews contract specification to ensure that they reflect the installation's pest management plan, provides guidance on tailoring pest control specifications, and participates on technical review boards / teams for source selection actions.

## TYPES OF CONTRACTS

### FACILITIES SUPPORT

Facilities support contracts (FSC) for base operating support (BOS) may include pest management services such as pest control and grounds or landscape maintenance, which are included as annexes to the FSC. FSCs are used at both permanent installations and semi-permanent deployment and contingency installations such as Navy construction battalion civic action details (CCAD) or Army Forward Operating Bases (FOB).

### CONSTRUCTION

Pesticides may be applied as part of construction projects, primarily to prevent future pest infestations of the structure. This includes termiticides applied as a barrier prior to laying the structure foundation to prevent subterranean termites. Unified Facilities Guide Specifications (UFGS) for termiticide treatments provide standardized contract specifications. Additionally, pre-emergent herbicides may be applied to the ground before a roadway or sidewalk is constructed. Non-chemical control measures such as termite or weed barriers may be included in these contracts. The pest control monitoring and performance assessment sections are often overlooked because they are “buried” in the construction contract.

### CONTINGENCY

Temporary pest control services may be required during contingency operations such as base camps in combat operations, disaster relief, or humanitarian civic action operations. Pest control, and specifically vector control, may be stand-alone contracts or part of a FSC. Additional guidance on developing pest management requirements in contingency contracts can be found in the AFPMB [Technical Guide No. 24](#), and the [DoD Guidance on All Aspects of Pest Control Activities during Military Contingency Operations](#), (CAC required).

## COOPERATIVE AGREEMENTS

Under 16 U.S. Code Sect 670c-1(a) a cooperative agreement (CA) is an alternate acquisition vehicle between the DoD and States, local governments, Indian tribes, nongovernmental organizations, and individuals to obtain pest management services if the purpose is to maintain and improve natural or cultural resources on military installations. This agreement can also be used for State-owned National Guard installations. With this guidance, a CA can be used to establish an agreement for mosquito control on wetlands or invasive species control in natural areas. CAs allow use of sole-source service providers and are most appropriate for State or local government agencies. Using a CA or sole-source provider must be justified with a supporting document. CAs require substantial Government involvement; a CA technical representative (CATR) must be fully engaged with the cooperator and routinely be present when the cooperator is performing their work. This is usually done as a performance assessment.

## NATURAL RESOURCES

Pest management that protects natural resources can be sourced through a contract or CA. These contracts or CAs are usually stand-alone, but may be part of a larger contract such as a habitat restoration or enhancement. They can also be regional indefinite delivery, indefinite quantity (IDIQ) contracts that allow several installations to create individual task orders for services as needed. An example is a regional invasive weed control IDIQ contract. Inter-service agreements (ISA) are another alternative to a contract that can be used for natural resources related pest management. ISAs can be established with the USDA Wildlife Services for predator management and for Bird Aircraft Strike Hazard (BASH) / Wildlife Aircraft Strike Hazard (WASH) prevention.

## AERIAL SPRAY

If aerial spray is performed routinely, services can be provided by stand-alone contracts or included in a FSC. Per DoDI 4150.07, aerial spray projects on DoD installations must first be validated as necessary because other IPM methods are not cost-effective, because it must be used to complement existing methods, or because it will be used in a public health or natural resources emergency. These contracts may require NEPA, Hold Harmless Agreements and DoD approval to fly over and operate aircraft on DoD property.

## AGRICULTURAL LEASES

An agricultural lease agreement is a contract between the DoD and a farmer, or other lessee, in order to manage DoD lands through agricultural activities. Common activities include row crops, orchards, production nurseries, timber, and livestock grazing. The installation Natural Resources Program usually provides oversight and ensures compliance of this program. The lease agreement usually includes a soil and water conservation plan. The conservation plan requires the lessee to be responsible for preventing pests including mosquitoes, rodents, weeds and other agricultural pests. They are also required to comply with all Federal, state, local and DoD regulations and policies.

## CONTRACT AND PEST MANAGEMENT PERSONNEL

Few people on the service acquisition team will have the technical background to understand pest management requirements. On a small pest management contract or CA, the project

manager may also monitor the contract, and will require appropriate training to assume this responsibility. On larger service contracts, the contracting officer, project manager, and other team members must rely on subject-matter experts (SMEs). At the installation, SMEs include the installation IPM Coordinator, pest controllers, and pest control performance assessment representatives (PAR) / quality assurance evaluators (QAE). External sources include DoD entomologists and pest management consultants, local public agencies (i.e. mosquito control agencies, cooperative extension, county agriculture commissioner, non-governmental organizations), and even commercial pest control companies.

## COMPLIANCE REQUIREMENTS

Most contracts provide a blanket statement addressing compliance. Specific regulatory sources should be cited in all contracts, especially local regulations and DoD policies and directives. In addition to listing the regulatory sources, contractors should also be provided copies of, or links to, these documents. If the contract requires compliance with the installation IPM Plan, then a copy of this needs to be provided.

## CONTRACT STRUCTURE

### PERFORMANCE-BASED CONTRACTS

The Federal Acquisition Regulation (FAR), in implementing public law 106-398, states that performance-based acquisition (PBA) methods should be used to the maximum extent practicable. Performance-based contracts for services involves performance requirements and acquisition strategies that describe and communicate measurable outcomes rather than direct specific performance processes. It is structured around defining a service requirement in terms of performance results and providing contractors the latitude to determine how to meet those objectives. Simply put, it is a method for defining *what results are required* and placing the responsibility for *how it is accomplished* on the contractor.

It is challenging to establish measurable performance standards in performance-based pest control contracts when trying to control a variety of pests in different locations and environments. For some pests, such as flies, 100% control may not be achievable or practical. Determining a performance level in which flies do not cause an adverse impact on health or operations, and is acceptable to tenants, can be difficult. Also, some pest control operations may need prescriptive specifications due to the potential hazards, or in keeping with DoD policy or procedures. Such operations that may be more prescriptive include structural fumigation, and pre-construction termite treatments and barriers.

### PERFORMANCE WORK STATEMENT

Required products or services must be defined before a solicitation can be issued. The specifications are commonly referred to as the performance work statement (PWS), or on some contracts, the statement-of-work (SOW). General guidance on PWS preparation is found in FAR 37.602 and includes the following:

- Describe the work in terms of required results rather than “how” the work will be accomplished.



- Assess work performance against a measurable performance standard.
- Use measurable performance standards and financial incentives in a competitive environment to encourage competitors to develop and implement innovative and cost-effective methods to accomplish the work.

The PWS provides a detailed description of the proposed work so that the prospective contractor understands the full scope of the requirement. The PWS should include:

1. Specific regulatory requirements. This section should not just state “all Federal, State, and local regulations,” but identify each specific regulations, such as applicable state or country regulations. DoD and Service-specific directives must also be identified, and provided electronically or in hard-copy. If the requirements include compliance or conformance with the installation IPM plan, then this document must also be made available to those bidding on the contract. If the contract is in a foreign country, the PWS should reference the country’s final governing standards (FGS). If the country does not have a FGS, then United States Environmental Protection Agency (USEPA) standards will apply.
2. Pesticide handling requirements. The PWS should specifically state whether the contractor will be allowed to store and mix pesticides on the installation. If the installation expects the contractor to use installation facilities for a pest control shop, pesticide storage, and pesticide mixing site, government- and contractor-provided facilities must be identified.
3. Work locations. Identify where the work will be conducted, such as cantonment areas, natural areas, roadways, training areas, etc.
4. Managed pests. The PWS will list the types of pests the contractor will control and the performance standards used to assess the contractor’s work.
5. Use of IPM. In keeping with the DoD policy on IPM, the PWS should state that the contractor will employ all applicable IPM methods, and that their use of IPM will be specifically described in the contractor work plan once the contract has been awarded.

The PWS should also inform the prospective contractor that DoD requirements may be more stringent than State or host-country. These more-stringent requirements commonly include requesting approval for all pesticides, certifying all pesticide application personnel, and reporting all pest management operations.

#### CONTRACT FORMAT

Most contracts use the Uniform Contract Format (UCF), as described in DFARS Subparts 204.70 and 204.71, which specifies the distinct contract sections and sequence. It is formatted into three parts and their subsections:

- Part I – “The Schedule”
  - Section A – Contract Form
  - Section B – Supplies or Services and Prices / Costs
  - Section C – Description Specs and Statement of Work
  - Section D – Packaging and Marketing
  - Section E – Inspection and Acceptance
  - Section F – Deliveries or Performance
  - Section G – Contract Admin Data
  - Section H – Special Contract Requirements

- Part II – Contract Clauses
  - Section I - Contract Clauses
- Part III – List of Documents, Exhibits, and Other Attachments
  - Section J – List of Attachments

The sections of contracts that require pest management technical input are Part I, Section C and F, and Part III, Section J. Section C contains the specifications for pest management requirements; Section F contains the deliverables and may contain the performance standards; and Section J will contain the pest-specific performance standards if numerous.

## **SPECIFICATIONS**

Contract specifications are the measurable requirements that the contractor must meet in order to fulfill the contract. Most of the requirements are based on regulations and DoD-specific policies. The following specifications should be included and addressed in every pest management contract.

### **SAFETY**

Contractors are usually required to provide a safety plan that addresses safe pesticide handling practices and details their procedures in the event of a pesticide mishap. The safety plan may be incorporated into a contractor work plan. All contract pesticide applicators should receive safety training during initial certification/licensing, and during recertification. All applicators must read and follow the pesticide label, and understand the safe handling procedures and first aid treatment for that pesticide. The contract PAR/QAE/COR, installation IPM Coordinator, or other DoD official may stop a contractor's work if it is not being performed safely or creates a hazard to the applicator, other persons, or the environment exists.

### **INTEGRATED PEST MANAGEMENT**

DoD policy requires all pest management service providers, including contractors:

1. Use IPM techniques when carrying out pest management activities, and promote IPM through procurement, regulatory policies, and other activities.
2. Use IPM to prevent or control pests and disease vectors that may adversely impact readiness or military operations by affecting the health of personnel, or by damaging structures, materiel, or property.

The specifications should state that the contractor will practice and promote IPM. This includes describing how they will use IPM in their work plan, including interviewing the customer about the pest problem; conducting inspections or monitoring; identifying the pest and assessing the extent of the pest problem; considering and using non-chemical methods of control; using low-toxicity, target-specific pesticides when needed; evaluating the efficacy of control and taking follow up action; recording and reporting pest management operations; and reporting conditions that were conducive to the pest infestation and recommending preventive measures to the customer. Specifying that the IPM procedures follow and in accord with the Garrison/Installation IPM plan will help ensure IPM is practiced by contract personnel.

### **PERSONNEL CERTIFICATION, TRAINING, AND LICENSING**

List the specific training and certification/licensing that allows the contract applicators to apply pesticides on the installation. This includes the specific pest management categories of work they intend to perform. Each state and DoD has their own certification/licensing categories but the USEPA general categories are:

1. Agricultural pest control
2. Forest pest control
3. Ornamental and turf pest control
4. Seed treatment
5. Aquatic pest control
6. Right-of-way pest control
7. Industrial, institutional, structural, and health-related pest control
8. Public health pest control
9. Regulatory pest control
10. Demonstration and research pest control
11. Aerial application pest control

All contractor personnel applying pesticides on a DoD installation must be certified/licensed as commercial applicators with appropriate categories to meet PWS. For CONUS, Alaska, and Hawaii installations, the applicators must be certified/licensed by the state in which the installation is located or by the USEPA if the state does not have their own certification program. For OCONUS installations and operational bases, the applicators must have training and/or certification/licensing that is equivalent to the USEPA from the host nation, DoD or contractor's country of origin. Per DoDM 4150.07-V2, contract personnel may attend a formal DoD pest management training course on a space-available basis. The specifications shall identify the state or other specific source of the training and certification/licensing and require proof and copies of valid certification/licensing.

#### BUSINESS LICENSING

If required, pest management businesses must be properly licensed in the state or country in which they are operating. A copy of the current business license is required.

#### PERMITS

The contractor may be responsible for obtaining all permits required to perform the work on a DoD installation such as a depredation permit or a National Pollutant Discharges Elimination System (NPDES) permit or may be required to provide the appropriate information to be included on the installation permit. The installation environmental department can identify the required permits. Copies of all permits shall be provided prior to commencing work.

#### VEHICLES

Vehicles used to transport pesticides shall be equipped with a fire extinguisher, a spill containment kit capable of containing any pesticide carried on the vehicle, an emergency eye wash station, at least two gallons of emergency wash water for personal decontamination, a first aid kit and air conditioning. Vehicle requirements are specified under "Pesticide Transport Vehicles" in AFPMB TG 14, Personal Protective Gear and Equipment for Pest Management Personnel. All pesticides carried on vehicles shall be stored in a locked compartment separate from the cab of the vehicle. Vehicles shall not be left unattended at any time unless properly

locked and secured. Include any installation and local requirements such specific pest control identification on vehicles. All vehicles shall be maintained with a clean and orderly appearance, free from pesticide residues or grime buildup. Vehicles shall not be cleaned, washed, or rinsed on Government property.

#### EQUIPMENT

The contractor shall provide all maintain all equipment in good operating condition, and take appropriate action to ensure the following:

- All tanks, hoses, pumps, control valves, and gauges shall be free of visible deterioration, shall not leak, and shall operate at the manufacturer's recommended rates and pressures. Equipment that has failed shall be replaced or repaired by the contractor prior to resuming operations.
- Screens, strainers, and filters shall be used and maintained per the pump, sprayer, and nozzle manufacturer's instructions.
- Spray nozzles shall deliver spray patterns as specified by the nozzle manufacturer. Nozzles that become clogged or eroded shall be repaired or replaced by the contractor prior to resuming operations.
- Ultra-Low Volume (ULV) equipment shall be calibrated to assure proper flow rate and droplet size of pesticide as required by the label. ULV equipment shall be calibrated, including droplet size analysis, 15 days prior to start of work and thereafter, every 50 hours of use (or per manufacturer's recommendations), or when the machine is repaired. Calibration and droplet analysis reports, when required, shall be maintained on file and submitted per Section F.
- All pesticide dispersal equipment, including bait stations and trays, shall be clearly and plainly marked with "DANGER"..."PESTICIDES", or as required by applicable regulations.

#### PESTICIDES

All pesticides must be used in accordance with all Federal, state, and local laws; installation regulations; and any requirements identified in Section J attachments. Regulations and requirements should be specified in the contract. All pesticides shall be procured, processed, handled, and applied in strict accordance with the manufacturer's label. All pesticides shall be registered with the EPA and the state in which they are purchased and used. The contractor shall maintain a book of labels and Safety Data Sheets (SDS) for pesticides they use or intend to use, and have it readily available for the Contracting Officer's (KO) inspection at all times.

All pesticides used by the contractor in the US shall be registered with the EPA and applicable state lead agency for the use intended. Contractor should review the Installation Pest Management Plan (IPMP) and provide Planned Pesticide Use Sheets, including labels and SDS for each pesticide intended for use, shall be submitted per Section F with the contractor's Work Plan. Approvals may be made for, and limited to, specific pests and sites. Any proposed changes in pesticide usage shall be submitted per Section F to the KO for approval at least five business days in advance of the anticipated use.

In contingencies, the contractor may be limited to using only the EPA-registered pesticides on the [DoD Contingency Pesticides list](#). Use of pesticides banned by EPA is prohibited. Guidance for purchase and procurement of pesticides during military contingencies, and approval

procedures for procurement and use of non-EPA registered pesticides for emergencies is provided in AFPMB TG 24 and DoDI 4150.07.

#### DISPOSAL

Except for situations where waste must be disposed of on an installation, such as in a contingency, no pest management operation wastes will be disposed of on the installation. For disposal during contingency operations, refer to the requirements in AFPMB TG 24.

#### SPILLS

This specification should reference specific requirements of the installation spill response plan including any reporting requirements. The contractor must have an appropriately equipped spill kit on the pest control vehicles and at pesticide storage, mixing, and application sites. Additional information on pesticide spills may be found in AFPMB TG 15, Pesticide Spill Management and Prevention.

#### ON-SITE MIXING

Mixing on Government property is not generally allowed unless the contractor has a Government-furnished mixing facility on-site. The contractor shall not mix pesticides on Government property unless specifically authorized by the contract. If mixing is authorized, it shall be done at an approved Government-furnished facility or over an approved portable containment device that prevents the release of spilled pesticide from the site. All water sources shall be equipped with proper back-flow prevention devices. An air gap shall be maintained between the water source and the pesticide tank. A spill kit must be readily available at the mixing site.

#### ON-SITE PESTICIDE AND MATERIALS STORAGE

Storage of pesticides, equipment or vehicles on Government property is not generally allowed due to the increased environmental and safety liability. A contractor may be allowed to use an existing Government-furnished facility that may have been used as a DoD pest control shop in the past. The contractor shall not store pesticides on Government property unless specifically authorized by the contract. If storage is authorized, it shall be done at an approved Government-furnished facility, if available. If a Government-furnished facility is not available, the contractor shall furnish an approved storage facility. Pesticide storage facilities may be regulated by the state, or by DoD policies or regulations. Guidelines for pest control shops and pesticide mixing and storage facilities are found in AFPMB TG 17, [Military Handbook: Design of Pest Management Facilities](#). All pesticide storage facilities must have a spill kit readily accessible.

#### OCCUPIED SPACES

Liquid or aerosol pesticides shall not be applied in occupied spaces when people are present. Dust pesticide formulations shall not be applied in occupied spaces if the dust can be carried by air currents to people. Gel baits, cockroach, rodent traps, and ant bait stations, or other pesticide formulations that do not volatilize or drift in air currents may be applied in occupied spaces. Rodent bait stations should not be used inside structures.

#### PERSONAL PROTECTIVE EQUIPMENT

The Contractor shall provide personal protective equipment (PPE) to each of their pest control applicators. The equipment shall be worn as required by the pesticide label and SDS.

#### SCHEDULED PEST CONTROL SERVICES

Scheduled pest control services shall include both inspection and treatment of pests. The specification should identify which pests or pest groups will be managed with scheduled services. Preventive applications of pesticide in the absence of a pest or signs/symptoms of a pest are prohibited except when approved by the KO with consent of the DoD Pest Management Consultant. Exceptions may include termite pretreatment, and pre-emergence weed and mosquito larval control (in special circumstances, such as pre-flood), where it is an effective means of IPM.

#### UNSCHEDULED PEST CONTROL SERVICES

This section should identify which pests or pest groups require unscheduled service. Unscheduled services include change of occupancy in housing, and trouble calls, including emergencies. Time to respond to these requests will be listed in the specific pest or pest group specifications.

#### EMERGENCY PEST CONTROL

Emergency pest control operations generally involve disease vectors, such as mosquitoes, or pests, such as filth flies, that are in high abundance and are transmitting or increasing the risk of disease transmission. Preventive medicine / public health (PM/PH) personnel on installations or during contingency operations determine whether emergency pest control is required.

Emergencies include 1) human cases of vector-borne disease, 2) pathogen detection in local vectors, 3) large increase in disease vectors, or 4) environmental and infrastructure changes due to disasters that increase the disease risk. PM/PH personnel may request emergency control through the QAE/PAR or IPM Coordinator and identify specific areas requiring control. These personnel should also be consulted prior to establishing a contract to determine the need for an emergency pest control contract.

Emergency pest control operations include the following:

- a. Flying insect control. Control of mosquitoes, flies and other flying insects may be required after a disease outbreak or increased risk of disease transmission. Control may also be needed following a disaster. Large area adult mosquito or fly control may require the use of hand-held or vehicle-mounted ultra-low volume (ULV) foggers which are sprayers that emit small droplets of pesticide which come into contact with flying insects to kill them. ULV equipment requires proper calibration and measurement of the droplet size in order to be effective. Other operations may include residual application of pesticides on buildings, vegetation, human waste, or dead human and animal bodies. Contractors must have the proper equipment in their inventory or have ready access to them. Use of this equipment also requires specialized training.
- b. Vector surveys. Emergency response may require the contractor to monitor the effectiveness of control operations by conducting surveys. Surveys may require specialized traps, knowledge of using those traps, and the ability to handle and identify collected insects. Surveys may be conducted over an extended period of time to ensure effective control and reduction of the health risk posed by the emergency.
- c. Aerial spray support and operations. These operations may require specialized pesticide applicator qualifications or equipment. Pilots and operation supervisors may be required to be licensed or certified for aerial pesticide application.

Personnel conducting these operations must be certified in public health or health-related pest control. Time period to respond depends on the level of pests requiring control and the risk that they pose. However, contracts should specify that the contractor be prepared to respond within 24 hours. Level of control is when the pest no longer poses an immediate threat and is determined by quantifiable survey results and a risk assessment by the installation preventive medicine / public health personnel. Continued control and/or surveys may be required after the emergency to maintain pests/vectors at a level to prevent disease transmission or other health risks.

#### PEST MANAGEMENT REPORTING

Contractors must use the pest management reporting methods and procedures determined by each Service. All the Services use a web-based or electronic reporting system. All pest management operations including surveys, inspections, and non-chemical and chemical control shall be reported. The contract will specify the frequency of reporting. In areas where internet access is not available, the contractor may use an electronic or hard copy DD form 1532-1 or other PMC approved form.

#### DELIVERABLES

Typical deliverables for pest control contracts are:

1. Copies of pesticide applicator certifications
2. Copy of business license / insurance
3. Copy(ies) of permit(s)
4. Ultra-low volume (ULV) equipment calibration and droplet analysis records or reports. ULV applications or cold fogging to control adult mosquitoes and other flying insects is only effective if the droplets dispersed are the correct size. This record/report should be provided prior to the start of the control season to ensure that the equipment will provide effective control.
5. Planned pesticide use sheets including pesticide labels and safety data sheets (SDS). The contractor shall provide a list of all pesticides that they intend to use on the installation.
6. Contractor's work plan (CWP). The CWP shall establish the strategy and methods for conducting a safe, effective, and environmentally sound integrated pest management program in compliance with the contract specifications. Prospective contractors may need to review the IPMP for installation historical pest activity and abatement action records, survey facilities and grounds, and consult with the installation IPM coordinator during plan development. The plan requires KO approval, but should be reviewed by a PMC. The CWP should contain the following:
  - a. Survey and monitoring methods for detecting pests
  - b. IPM methods that will be used for each of the pests/pest groups
  - c. Record-keeping procedures
  - d. Warranties
  - e. Education and communication to installation personnel to prevent pests
  - f. Pesticide labels and SDSs
  - g. Planned pesticide use sheets
  - h. Plan for complying with all regulations

7. Pest Management Plan. Some contracts, such as invasive weed control, require the contractor to submit a comprehensive management plan in which pest management is only one component.
8. Report conditions conducive to pest infestation. The contractor should identify facilities, conditions, or factors that contribute to the pest problem. A report of these conditions should be submitted to the KO or PAR/QAE so that the root cause of these conditions can be corrected.
9. Termite treatment warranties
10. Termite and wood decay inspection (DD form 1070)
11. Adult mosquito collection record/report
12. Larval mosquito collection record/report
13. Stored-product pest survey record/report
14. Other pest survey reports as required
15. Aerial spray FAA approval
16. Report of pest management operations. The contractor may be given access to the Service's web-based or electronic pest management record keeping and reporting system to make direct record entries. Otherwise, records and reporting is submitted on the DD Form 1532-1, [Pest Management Maintenance Record or AFPMB-approved Excel DD Form 1532-1](#) located on the AFPMB webpage.

#### **PEST CONTROL PERFORMANCE STANDARDS**

The general measurable performance standards are:

- Time period to respond. This is the period of time between when the service request is received from the customer by public works/facilities or the contractor, and when the service provider responds to the request. This could be showing up on-site or contacting the customer.
- Time period to obtain control. This is the period of time between when control is conducted and when the target pest is controlled to the specified level of control.
- Time period to maintain control. This is the time period after achieving the specified level of control that the target pest population remains at or below the level of control.
- Level of control. This is a measurement of the target pest population after control has been achieved. Level of control may be presence or absence of the pest after control, or it may be a comparison of pest population level based on pre-treatment survey and post-treatment survey. Level of control can be expressed as an absolute number (i.e. "1 ant per room") or a percent reduction in the pest population (i.e. "100% control")

The performance standards may not be the same between geographical areas, thus setting the standards for each pest group requires local pest management expertise. Contract specification writers should consult with a DoD PMC, the pest control PAR/QAE, and/or the installation IPM Coordinator to assist with determining the time periods and level of control. Some state School IPM Programs have established pest action thresholds (number of pests that are acceptable in a facility and when control should be used) that can be used as a guide to establish "Level of Control." The guide for the Maryland School IPM program (<http://mda.maryland.gov/plants-pests/Documents/ipmacthr.pdf>) lists threshold levels for some



common pests as well as provides instructions on setting threshold levels. Guidance for setting performance standards for general pest groups is provided below. The pest groups can also be broken out into specific pests or operations. For example, where mosquitoes need to be controlled, the contract may include specifications for adult mosquito surveillance, larval mosquito surveillance, adult mosquito control, and larval mosquito control.

#### NUISANCE PESTS

Nuisance pests can include ants, cockroaches, fleas, spiders, silverfish, scorpions, crickets, centipedes, house flies, millipedes, mites, beetles, and stored-product pests. Both occupied buildings and storage warehouses may be the target location for control. The objective of control is generally to prevent nuisance to persons and real property indoors, but may include some outdoor areas. Control of indoor pests may also include outdoor pesticide applications and other control methods around buildings.

- Time period to respond. Many nuisance pest complaints do not require an urgent response. If complaints occur in areas that have a significant impact to mission or on personnel, such as the Child Development Center or a dining facility, then a shorter response time may be required.
- Time period to obtain control. This time period may be determined by the type of control used. Some pesticides for nuisance pests, such as insecticidal baits, do not kill the pest immediately and may take 24 to 48 hours or more before control is apparent. This should be taken into consideration when determining the time period to obtain control.
- Time period to maintain control. Generally, nuisance pest control methods provide long term control and periods of a month or more should be expected.
- Level of control. One hundred percent control of pests in occupied spaces may be the desired outcome but reduced pest populations may be acceptable in old or poorly maintained facilities. Complete control outdoors is unrealistic, but the level of control should minimize pest nuisance.

#### DISEASE VECTORS OR PUBLIC HEALTH PESTS

This pest group includes those pests associated with human and animal disease transmission such as mosquitoes, ticks, fleas, rodents, filth flies, and biting flies. The group may also include bed bugs, which aren't associated with disease, but bite and spread rapidly, and can therefore have a severe impact on military operations. Venomous stinging arthropods, such as bees and wasps, are also included in this group. Pest management operations for disease vectors and public health pests may occur in and around occupied buildings, or may target the source of the pest, such as marshes and other standing water sources where mosquitoes breed. This is the primary group of pests of concern on contingency operations.

- Time period to respond. Service requests may be based on customer-submitted requests or the results of pest surveys or surveillance. Response should occur within 24 hours when the pest poses an immediate threat or an increased health risk. In contingency operations where disease vectors are a known to occur and are common pests, this may be a scheduled service.

- Time period to obtain control. When the pest poses an imminent threat, control should immediately kill or remove the pest, or provide a barrier to prevent contact with humans and domestic animals.
- Time period to maintain control. Indoor control should be long-term. It may require identifying structural defects conducive to pest infestation, such holes in window screens, and the subsequent correction by the public works/facilities department. A single treatment may not control pests outdoors and may require repeated follow-up treatments.
- Level of control. The goal for indoor control is 100% elimination of the pest. Outdoors, levels of control are based on pre- and post-treatment survey/surveillance. Appropriate levels of control should be based on the survey/surveillance and lower pest populations to a level that will reduce the risk of disease or injury.

#### STRUCTURE-DAMAGING PESTS

These pests include termites and other wood-destroying organisms, such as wood-boring beetles, powder post beetles, carpenter ants, and carpenter bees. Termite control performance assessment depends largely on ensuring the inspections and treatments are done properly. Inspections should always be performed to identify the pest, determine the extent of the infestation, and determine the appropriate control method. The contractor conducting a fumigation should set up monitoring devices throughout a structure to ensure the proper concentration of fumigant reaches each area of the building. For subterranean termites, the proper concentration of termiticide must be used and properly applied around a structure. Only non-repellent termiticides are allowed. Spot-treatments may be appropriate for wood-destroying insects other than termites.

- Time period to respond. Generally, this type of pest problem is not urgent. Service requests may be based on customer-submitted requests or a facilities inspection. The appropriate response always includes an inspection of the facility to determine the cause and the extent of the problem. Control measures will be determined based on the result of the inspection and may take weeks before initiation.
- Time period to obtain control. This is dependent on the type of pest and the control method used. Fumigation for dry wood termites will result in immediate control. Barrier treatments around buildings for subterranean termites may not kill all the termites immediately, but is designed to prevent building infestation. Control for all pests should be obtained within 30 days.
- Time period to maintain control. Control can be maintained for one year for dry wood termites and five years for subterranean termites. Although fumigation kills dry wood termites and other pests immediately and does not leave a residual, the contractor must provide a warranty of at least one year. The contractor, along with the PAR/QAE, should conduct inspections six months and 12 months after the treatment. Warranties for subterranean termites should be for a minimum of five years. Control of all other wood-destroying organisms should be one year.
- Level of control. The level of control in the structure should be 100% for the time periods listed above. Inspections should be performed to verify.

#### LAWN, TURF, AND ORNAMENTAL PLANT PESTS

Pests in this group include plant-sucking insects, beetles, caterpillars, and fungi. Identification of these pests is usually accomplished through observation of the damage that they cause. Control

is usually not done for a single small plant unless there is the potential for the pest to spread to many other healthy plants. Pest infestation on a tree may warrant control.

- Time period to respond. Generally within five days. Any longer may result in the destruction of the plant. Spread to other plants should also be considered, and a more timely response will reduce the risk of spread.
- Time period to obtain control. Usually within seven days, depending on the control method.
- Time period to maintain control: Usually 60 days, depending on the control method.
- Level of control: This is dependent on the type of pest and an acceptable level of pest infestation. Level of control may be measured in number of pests or the percent of the plant or turf that is damaged by the pest.

#### VEGETATION MANAGEMENT

This may include aquatic, landscape, or rights-of-way weeds. The need for weed control is usually based on observation. Weed control may also be a routine, seasonal operation that does not require a service request.

- Time period to respond. Generally within seven days. Shorter if weeds pose a hazard such as trip or fire hazard.
- Time period to obtain control. Usually within 21 days, depending on the control method.
- Time period to maintain control: Usually 60 days for aquatic weeds, depending on the control method. Landscape weeds should be controlled throughout the season. Season-long control for rights-of-way reduces pesticide use and lowers overall cost.
- Level of control. Level of control is dependent upon the location or purpose of control. For example, if weeds are a fire hazard, then the level should be when the weeds no longer pose that hazard. If the weeds on sidewalks are unsightly, then 100% control would be expected.

#### VERTEBRATE PESTS

Vertebrate pests can include gophers, ground squirrels, moles, birds, bats, rats, snakes, and feral cats and dogs. They can also include coyotes, foxes, deer, and bears depending on the location of the installation. The purpose of control is to prevent disease and injury to humans and prevent property destruction.

- Time period to respond: A short time period may be required if the animal poses a health- or accident-hazard, or can cause extensive destruction to natural resources or real property. Response may take up to a week for some vertebrate landscape pests. Shorter response times are desired to prevent further destruction of property.
- Time period to obtain control: This is dependent on the type of control. The use of traps and some toxicant baits may take several days before control is achieved.
- Time period to maintain control: The goal is to permanently remove the animal from the area where they have become a pest, pose a hazard, or cause property damage.
- Level of control: 100% control.
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## CONTRACT REVIEW, APPROVAL AND MILITARY SERVICE CONTACTS

DoDI 4150.07 states that “pest management consultants shall review and technically approve contract documents for pest management operations, including augmentation contracts, to ensure that appropriate pest management stands and IPM are specified.” PMCs are also available to assist Spec Writers develop technical portions of the contract. The review should also include review and approval of pesticides on the contractor’s planned pesticide use sheets. The Navy PMCs assist with the preparation and routine update of the FSC/BOS pest control and grounds maintenance contract annexes to expedite the review process for new contracts. Templates prepared by PMCs for cooperative agreements, invasive weed control, aerial spray, and agricultural leases (including soil and water conservation plans) may be available from each of the Services. Pest management consultants and technical reviewers vary by Service. Listed below are the primary Service consultants for pest management contract issues.

**a. US Army Environmental Command**, Fort Sam Houston, TX, Dr. William Miller, (210) 466-1302, DSN prefix 450, email: [william.b.miller54.civ@army.mil](mailto:william.b.miller54.civ@army.mil).

**b. Naval Facilities Engineering Command Atlantic**, Norfolk VA, Ms. Sabra Scheffel, (757) 322-4320, DSN prefix 262, fax (757) 322-4805, e-mail: [sabra.l.scheffel.civ@us.navy.mil](mailto:sabra.l.scheffel.civ@us.navy.mil).

**c. Air Force Civil Engineer Center**, Tyndall Air Force Base, FL, Mr. Don Teig (850) 283-6465, DSN prefix 523, e-mail: [donald.teig.1@us.af.mil](mailto:donald.teig.1@us.af.mil).

## CONTRACT PERFORMANCE ASSESSMENT / QUALITY ASSURANCE

### PERSONNEL

The KO’s representative responsible for contract performance assessment (PA) or quality assurance (QA) varies depending on the type of contract.

- **FSC.** For a BOS FSC, performance assessment representatives (PAR), quality assurance evaluators (QAE), Contracting Officer’s Representative (COR), or equivalents in the installation public works or facilities department are specifically trained to perform these duties for not only pest control and grounds maintenance, but for other facilities support services. Pest control PARs and QAEs are required to have pest management training.
- **Construction.** The PAR/QAE for the construction project will be responsible for the execution of pest management operations (i.e. termiticide treatment) during the project. These personnel are usually not specifically trained in pest management and are not familiar with pest management requirements.
- **Contingency.** A contracting officer representative (COR) is usually assigned to these contracts to ensure effective execution of the specifications. They may be responsible for all services provided under the contract and may not be specifically trained in pest management. For Navy CCADs, the detachment officer in charge (OIC) and the senior staff non-commissioned officer (SNCO) are designated as the FSC PARs. The CCAD PARs deploying to the Pacific region are all provided PAR and pest control PAR training. In combat, humanitarian relief, and humanitarian civic action operations, deployed military entomologists and other preventive medicine personnel may serve as PARs/QAEs.

- Cooperative Agreements. CAs are for natural resource (NR) or cultural resource (CR) pest management projects, thus monitoring of these CAs may be assigned to NR or CR personnel. These personnel serve as CA technical representatives (CATR) and may have received COR training but usually are not specifically trained in pest control.
- Natural Resources. Invasive weed control and predator management contracts are usually monitored by NR personnel, who are usually trained as CORs but not specifically for pest control.
- Aerial Spray. Aerial spray projects usually involve a PMC who is certified in aerial application of pesticides and who has validated the project. The installation personnel who will monitor and conduct PA and QA on this type of contract must also be aerial spray trained or certified.
- Agricultural Leases. Installation NR personnel are responsible for ensuring that the lessee complies with all requirements of the lease agreement, including pest management and pesticide use.

#### TRAINING

DoDI 4150.07 requires that “PMQAEs or equivalents who inspect the performance of contractor-provided pest management services are DoD PMQAE-trained or hold DoD certification.” This requirement should also apply to personnel listed in the “Personnel” section above. Training courses are offered by the Army and Navy and listed and described at [http://www.acq.osd.mil/eie/afpmb/training\\_Certification.html](http://www.acq.osd.mil/eie/afpmb/training_Certification.html).

#### PERFORMANCE ASSESSMENT PLAN (PAP) AND METHODS OF ASSESSMENT

The PAP outlines the approach used by the PAR/QAE to assess the contractor’s work against measurable standards, such as timeliness and quality. It also lists methods of assessment (MOA) that include:

1. Periodic sampling: Periodic sampling requires a pre-determined plan of assessing a portion or all of the work depending on sample size and frequency of the operation. This is often used for mosquito control operations that have a pre-planned schedule during a pre-defined period of time and at set intervals.
2. Random sampling: This may be applied for recurring pest control operations such as rodent bait station maintenance and monthly inspections/treatments of child development centers or food service facilities.
3. Validated customer complaints. Customers observing defects in service that they have received and using a pre-determined procedure to report these defects to the PAR. All alleged defects must be examined within a reasonable time to validate that the performance standards were not met. Customer education may be required. For example, a customer needs to know that they may still see active cockroaches within 24 hours after treatment if insecticidal baits are used.
4. Unscheduled visits. The PAR may conduct impromptu assessments of pest management operations performance standards and objectives whenever practical.
5. Customer evaluations. This MOA collects data of contractor performance from the customer’s perspective through the use of feedback forms where applicable. Evaluation

forms should be self-explanatory and must include pertinent contract performance objectives and standards for the customer to objectively rate performance.

#### PERFORMANCE ASSESSMENT

The PAR/QAE must read and understand the contract and specifications. They must also read the contractor's work plan, if available, to understand how the contractor plans to control pests. For large contracts, such as FSCs, a specific PAP should be developed which lists each of the specification items, the performance objective, performance standard, method of assessment, and assessment level. For a new contractor, the PAR/QAE should meet with the contract personnel to define expectations and have a mutual understanding of the contract specifications. Partnering with the contractor is preferable to an inspector / inspected relationship. Assessment should include both document / record reviews and on-site observations.

Documents that should be reviewed include those listed in the Deliverables section. Pest management records should be reviewed routinely to ensure they are being submitted on time and that they are accurate. Records will also indicate whether the contractor is using IPM, which can be indicated by the use of surveillance, non-chemical control methods, low-toxicity pesticides, baits, sustainable control methods, and overall low pesticide amounts.

On-site observations should be made to ensure that pesticides are being mixed, stored, applied, and disposed of safely and in accordance with regulations. The PAR/QAE should accompany the contractor to do pre-treatment and post-treatment surveys and have a method to measure the level of control.

Assessments should be documented on a standard performance assessment worksheet.

#### RESOURCES

1. [Contingency Contracting. Defense Procurement and Acquisition Policy \(DPAP\)](#)
2. [Defense Acquisition University \(DAU\)](#)
3. [Federal Acquisition Regulation \(FAR\)](#)
4. [Acquisition.GOV](#)