Final

Marine Corps Air Station
El Toro
Pesticide Management Plan

January 1994

Prepared for:

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LIST OF ABBREVIATIONS

ABO	Air Base Order
CCR	California Code of Regulations
CFR	Code of Federal Regulations
CG/CO	Commanding General/Commanding Officer
CMC	Commandant of the Marine Corps
CWA	Clean Water Act
DOD	Department of Defense
EFA	Engineering Field Activity
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
FIFRA	Federal Insecticide, Fungicide and Rodenticide Act
HAZCOM	OSHA Hazard Communication Standard
HCP	Hazard Communication Plan
MCAS	Marine Corps Air Station
MCO	Marine Corps Order
NAVFACENGCOM	Naval Facilities Engineering Command
NPDES	National Pollution Discharge Elimination System
OSHA	Occupational Safety and Health Administration
PAR	Purchase Approval Request
PMC	Pesticide Management Coordinator
PMP	Pesticide Management Plan
RCRA	Recourse Conservation and Recovery Act
RQ	Reportable Quantity
SCP	Spill Contingency Plan
TPQ	Threshold Planning Quantity
TSCA	Toxic Substances Control Act

EXECUTIVE SUMMARY

A Pesticide Management Plan is required by the Marine Corps at all installations that conduct more than 0.5 work years of pest control operations annually. This site-specific Pesticide Management Plan for MCAS El Toro addresses the following:

- Pesticide management including storage, use, disposal, training, health and safety, and waste water discharges (Section 2.0)
- Regulations, including federal, state, Department of Defense, and MCAS El Toro (Section 3.0)
- Marine Corps Compliance responsibilities (Section 4.0)

This document, prepared by Science Applications International Corporation (SAIC) under contract to Southwest Division Naval Facilities Engineering Command, was prepared in accordance with the guidelines set forth in the following documents:

- "U.S. Marine Corps Environmental Compliance and Protection Manual" (MCO P5090.2), September 1991;

- "U.S. Marine Corps Environmental Compliance Evaluation" (MC-ECE), Volume II January 1993; and

- "Pest Management Policy and Procedures for Navy and Marine Corps Activities" (WESTNAVFACENGCOM Instruction 6250.1C), March 1993.

- Federal regulations (40CFR 150 through 40CFR 189)
- State of California Regulations (3CCR).

At MCAS El Toro, pest control and pesticide management oversight is provided by the Installation Department which is responsible for the maintenance and management of all station

operations, facilities, and lands. The Pesticide Office of the Installation Department is responsible for controlling pests in all station office buildings, food handling buildings, industrial buildings and hangers, houses, barracks, and across the airfield and golf course. Pesticide use, storage, and disposal by the Installation Department is conducted according to federal, state, and Department of Defense and MCAS El Toro regulations. The agricultural outlease farmers are responsible for pesticide use on their land and must provide monthly reports to the Orange County Agricultural Department. The Installation Department does not oversee or regulate pesticide use by the farmers.

1.0 INTRODUCTION

This Pesticide Management Plan (Plan) has been prepared in accordance with federal, state, and Department of Defense (DOD) requirements. The purpose of this plan is to provide a guidance document and regulatory summary for pesticide storage, use, disposal, and training. The Plan provides a description of the key parts of the pest management program including health, environmental and regulatory issues, staffing, and resources.

Details about applicable regulations are found in Appendices C through F, and a summary table is provided at the end of Section 3.0.

The development of this Plan involved contacting the Installation Department and the Pesticide Office at MCAS El Toro to study, evaluate, and report on current and anticipated pest management and pesticide usage practices at the Station. Further investigation required contacting the agricultural outlease farmers and the Orange County Department of Agriculture to determine which pesticides are used by the farmers. Finally, a search of federal, state and DOD regulations provided the guidelines by which pesticides are to be managed at MCAS El Toro.

2.0 PESTICIDE MANAGEMENT

This section discusses the various aspects of pesticide management at MCAS El Toro and provides background information on the Station and the pesticide management program.

2.1 Site Information

EPA Identification Number:	CA6170023208
Generator's Name:	Marine Corps Air Station El Toro
Mailing Address:	Facilities Management Division Code 1JG
	Santa Ana, CA 92079-5001
Site Address:	Same as above
Telephone Number:	714/726-2772
Contact Name:	Capt. D. G. Clark II
SIC Code:	9711 (National Security)

2.2 Licensed Pesticide Applicators

At MCAS El Toro, four groups of applicators are permitted to apply pesticides to lands and buildings owned or controlled by the Station.

- Two DOD Certified Pesticide Applicators work for the Installation Department and are tasked to control pests in buildings and residences within the security fence, the grounds surrounding the buildings, and in the air field.

- The Installation Department also employs a single Certified Pesticide Applicator to control pests at the Station Golf Course.

- Two civilian contractors are hired for either long-term maintenance contracts or one-time only projects: Mission Pest Control and Mission Miranda Pest Control. Mission provides termite

and gopher control while Miranda provides general pest control services for the entire Station, within the security fence.

- Four farmers lease land from the Station: Magarro Farms, Bordier's Nursery, The Irvine Company, and SeaTree Nursery. Due to restrictions on land usage and ownership near an air field, the Station is required to own land beneath the flight path. In the case of MCAS El Toro, some of the land is outside the security fence. Three farmers lease Station-owned land outside the security fence and one, the Irvine Company, leases land within the security fence and subleases its land to two other farmers. Each farmer and the amount of land they lease is listed in Table 2-1.

2.3 Storage

2.3.1 Installation Department

In 1993, a small building (approximately 900 square feet) was constructed for the sole purpose of storage and handling of pesticides. Building 753 was constructed according to the regulations set forth in the Military Handbook - Pest Control Facilities (MIL-HDBK 1028/8, 01 July 1984). It is located just to the northwest of the public works area. See Figure 2-1. This building is used to store the pesticides used by the two certified pesticide applicators working for the Installation Department. The maximum storage capacity of the buildings is approximately 2,000 gallons, but the actual amount stored is far less than that because no containers larger than 5 gallons are stored in the building. At any given time, the supply on hand is equivalent to a four to six month supply of pesticides, according to Jim Green, the Pesticide Program Manager. It is difficult to translate this supply into a percentage of the maximum storage capacity because the types of pesticides stored include aerosol spay cans, bait packs, concentrated solids, powders, pellets, glue boards, and gases. A complete list of the pesticides stored and used at MCAS El Toro is in Appendix A, and a summary table is presented in Section 2.4.

Table 2-1
Agricultural Outlease Farmers at MCAS El Toro

Name	Amount of Leased Land (Acres)	Address	Phone	Contact
Magarro Farms	413	3 Sterling Irvine, CA 92718	714/859-6506	John Magarro
Bordier's Nursery	205	7231 Irvine Blvd. Irvine, CA 92718	714/559-4221	Bill Russell
The Irvine Company	170	550 Newport Center Dr. P.O. Box I Newport Beach, CA 92658-8904	714/720-2292	Peter Changala
SeaTree Nursery	5	P.O. Box 92 Irvine, CA 92650	714/651-9601	Bob Seat

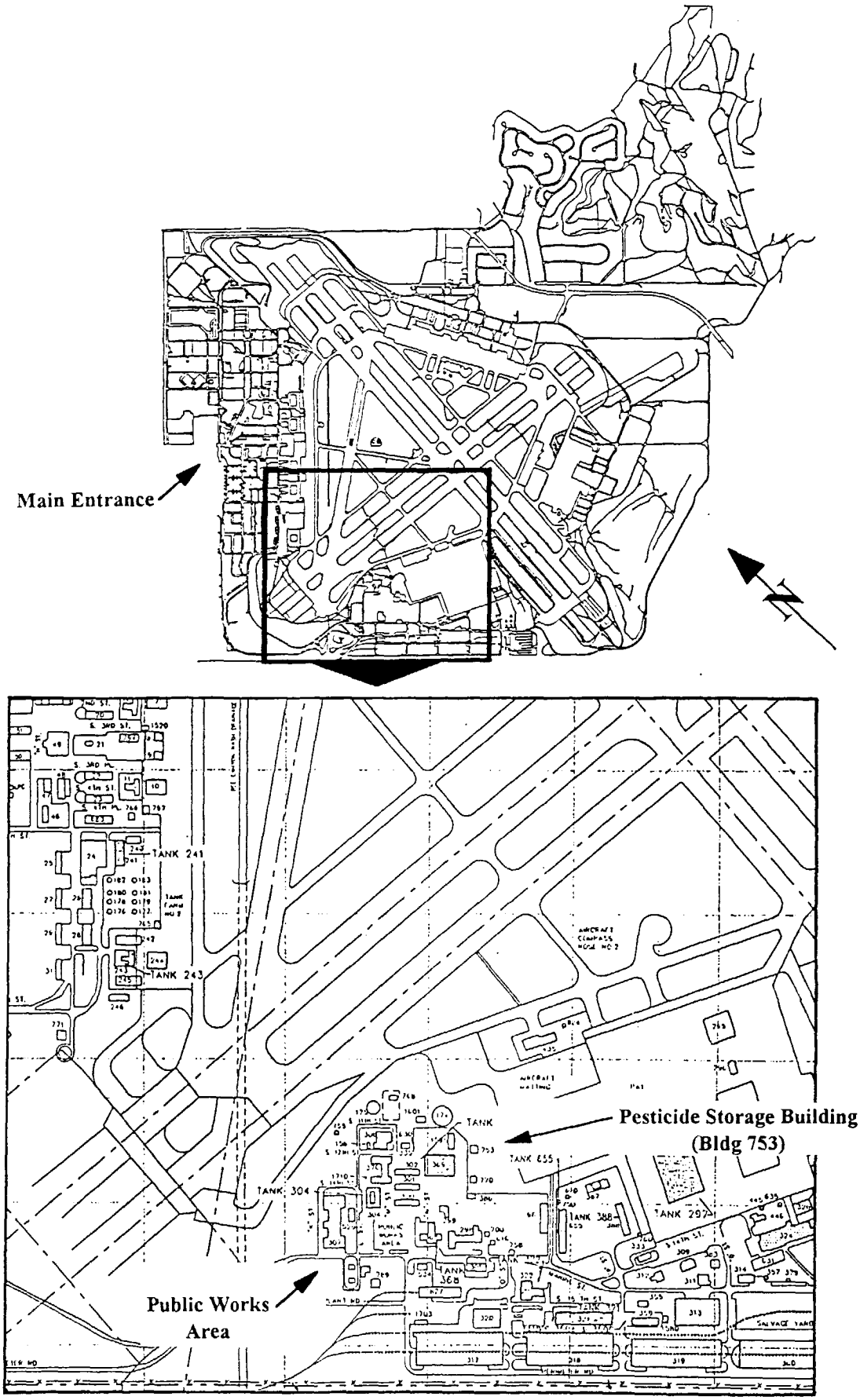

Figure 2-1
Location of Pesticide Storage Building

2.3.2 Agricultural Outlease Farmers

Each farmer stores pesticides on the land they lease, but MCAS El Toro is not responsible for ensuring proper handling and storage. These farmers fall under the jurisdiction of the California Agricultural Department, which conducts annual inspections of fields and facilities.

2.3.3 Golf Course

Pesticides used at the golf course are stored in a separate building near the course. This building, which is active and under the jurisdiction of the Installation Department, is scheduled for upgrading and renovation during 1994.

2.4 Usage

2.4.1 Installation Department

Oversight of pesticide usage at MCAS El Toro is provided by the Applied Biology Staff (Staff) Code 162A, of WESTNAVFACENGCOM in San Bruno, California. The Staff maintains a database of pesticide information and pesticide regulations in order to determine if a particular chemical can legally be used in a given state. This database is accessed by the Staff for all pesticide requests when a pesticide purchase approval request form is received. The requested pesticides are checked against applicable regulations and health effects criteria. If the pesticide is inappropriate for the stated application or illegal in a given state, alternatives are suggested. The most recent Pesticide Management Plan and Purchase Approval Request (PMP/PAR) forms for the Station and the golf course, included in Appendix A, list the operations where pesticides are used, the type of pest managed, the type of pesticide applied, the application rate, and the amount used annually. Once purchased, the pesticides are mixed, used, and disposed of according to: 1) the label on the pesticide product; 2) EPA guidelines for each pesticide; and 3) DOD guidelines for Pest Management Programs. Only DOD-Certified Pesticide Applicators perform these activities.

The Installation Department uses pesticides to control pests in the following locations:

- Food handling buildings
- Family housing and barracks
- Medical and child day-care facilities
- Airfield
- Office buildings and office spaces
- Industrial buildings and aircraft hangars
- Sewers, boiler rooms, and utility vaults
- Industrial areas for weed and vegetation control
- Ornamental plants, turf, and trees
- Wooden structures.

The types of pests encountered in each of these operations include:

- Cockroaches and silverfish
- Ants, fleas, earwigs, and crickets
- Flies, mosquitoes, and gnats
- Mice, rats, squirrels, and gophers
- House sparrows, starlings, and pigeons
- Spiders
- Wasps and bees
- Termites
- Grassy and broadleaf weeds, and turf fungi.

The type of pesticide used for each pest is summarized in Table 2-2 with full details listed in Appendix A.

Table 2-2
Pesticides Used at MCAS El Toro
by Installation Department and Station Golf Course

Pesticide			Pest
Common Name	EPA Number	Concentration	Common Name
Avitrol Corn Traps	11649-6	0.50%	House sparrows and starlings
Baygon 2% Bait	3125-121	2%	Crickets, ants, and cockroaches
Blazon	N/A	100%	Grassy and broadleaf weeds
Borid	44313-4	99%	Cockroaches
CB-580 Fogger	9444-20	0.5 lb/gal	Spiders
Chlorpyrifos	62719-88	20%	Cockroaches
Cynoff EC	279-3081	24.80%	Spiders, crickets, cockroaches, and fleas
Diazinon	10370-44-432	5%	Ants and fleas
Diquat	239-1663	35.30%	Grassy and broadleaf weeds
Dursban 2.5G	10370-54-432	2.50%	Fleas, ants, earwigs, and crickets
Dursban PT-270	499-147	0.50%	Ants
Dursban TC	464-562	42%	Subterranean termites
Flytec	2724-274-50809	1.025%	Flies
Fumitoxin Tablets	5857-1	55%	Ground squirrels and mice
Gencor 5E	2724-304-50809	65.70%	Cockroaches
Gencor Plus Fogger	2724-346-50809	0.55%	Cockroaches
Gopher Getter Strychnine Type I	36029-1	0.35%	Pocket gophers
Knox Out 2 FM	4581-335	2 lb/gal	Cockroaches, ants, crickets, and flies
Knox Out 2 PT-265A	499-228	1%	Cockroaches, ants, and flies
Krovar I	352-352	80%	Grassy and broadleaf weeds
Live Traps	N/A	N/A	Pigeons
Maxforce Ant Killer Bait Station	64248-2	1%	Ants
Maxforce Pharoah Ant Killer	1730-72	0.90%	Ants
Maxforce Roach Control System	64248-1	1.65%	Cockroaches
Maxforce Roach Killer Bait Gel	64248-5	2%	Cockroaches
Maxforce Roach Killer Bait Station	64248-1	2%	Cockroaches
No Foam B	50775-50008	25%	Grassy and broadleaf weeds
Orthene PT-280	499-230	1%	Cockroaches
Oust	352-401	75%	Grassy and broadleaf weeds
Pageant DF Chlorpyrifos	62719-163	50%	Ants, fleas, flies, and oakworms
Perma-Dust PT-240	499-220	20%	Cockroaches, silverfish, and ants
Precor 1% EC	2724-352-50809	1%	Fleas
Precor Plus Fogger	2724-337-50809	0.575%	Fleas
Princep 80W	100-437	80%	Grassy and broadleaf weeds
Pro-Control Ant Baits	11540-20	0.005%	Ants
PT565 Plus XLO	499-310	2.50%	Cockroaches
Purge Wasp & Hornet Jet Freeze	9444-98	0.763 lb/gal	Wasps and bees
Rodent Bait-Diphacinone CA	10965-50003	0.01%	Ground squirrels and mice
Round-Up	524-445	4 lb/gal	Grassy and broadleaf weeds
Safrotin Aerosol	2724-340-50809	1%	Cockroaches
Safrotin EC	2724-314-50809	50%	Cockroaches, fleas, and ants
Safrotin EC	2724-314-50809	0.25%	Fleas
Scotts Fungicide VII	539-261	59.00%	Turf fungi

Table 2-2 (continued)
Pesticides Used at MCAS El Toro
by Installation Department and Station Golf Course

Pesticide			Pest
Common Name	EPA Number	Concentration	Common Name
Scotts Fungicide VIII	539-194	3.70%	Turf fungi
Scotts Weed Grass Preventer	538-186	8.50%	Broad leaf weeds
Spike 80W	1471-97	80%	Grassy and broadleaf weeds
Staygon Boric Acid Insecticide	5481-79	95%	Cockroaches and ants
Sticky Glue Boards	N/A	N/A	Cockroaches, mice, and rats
Talon G bait packs	10182-39	0.005%	Mice and rats
Tim-Bor	1624-39	98%	Termites
Tomahawk traps	N/A	N/A	Cats, possums, skunks, racoons, pigeons,sparrows
Torus 2E	100-724	24.37 lb/gal	Cockroaches and fleas
Tridie PT-230	499-223	13%	Cockroaches
Tridie PT-230	499-223	4.30%	Drywood termites
ULD BP-300 Insecticide	11540-1	3%	Flies, mosquitoes, spiders, and gnats
Weather Blok	10182-48	0.005%	Mice and rats

2.4.2 Agricultural Outlease Farmers

The farmers who lease land from MCAS El Toro file annual Pest Management Plan and Purchase Approval Request forms with the Installation Department. These forms contain the same information that is included in the Station PMP/PAR forms. The latest forms from each of the farmers, except at SeaTree Nursery, are included in Appendix B. SeaTree Nursery is not required, in their lease, to provide a PMP/PAR to the Installation Department. These forms, in turn, are submitted for review to the Applied Biology Staff of WESTNAVFACENGCOM, though neither the Staff nor the Marine Corps regulates the pesticides used by the farmers. The type and amount of pesticides used by the farmers is regulated by the Agricultural Department of the State of California, through the Orange County Agricultural Department.

2.4.3 Contractors

MCAS El Toro hires contractors both on an as-needed basis and for routine general maintenance and service on the Station. When pesticides are used for specific projects, or as part of maintenance and service, the contractors fill out and submit a Pesticide Management Plan to the Pesticide Management Coordinator (PMC). The specific pesticide used varies according to application. The oversight performed includes monitoring the use of the pesticide. When the contracts are written, the contracting office ensures that the contractor has proper, complete, and up-to-date certification, training records, and insurance for pesticide application.

2.5 Disposal

2.5.1 Installation Department

Excess pesticides are disposed of according to EPA regulations, DOD regulations, and specific instructions printed on the label on each pesticide container. Typically, excess pesticide is either stored for future use in Building 753 or completely used during a particular application. Empty pesticide containers are disposed of following instructions on the container and EPA and state

regulations. These instructions typically require that the container be rinsed three times, wrapped securely in paper, and disposed of as normal municipal waste. The rinsate is recovered, saved, and reused for the next batch of pesticides mixed. The total rinsate generated from cleaning each container is usually less than a gallon, and this dilute quantity is usually negligible when mixing the next large (500 gallon) batch of pesticides.

No large containers, i.e., greater than 5 gallons, are used, because their disposal may require manifesting it off-Station as hazardous waste. As a result, small containers, which can be easily disposed of as municipal waste are typically purchased and used so no spent or excess pesticides are manifested off-Station as hazardous waste.

2.5.2 Agricultural Outlease Farmers

MCAS El Toro is not responsible for disposal or disposal oversight of spent or excess pesticides or containers. The farmers comply with regulations governing pesticide and container disposal (40CFR 165.7 - 165.9 and 3CCR 6672 - 6684).

2.5.3 Contractors

MCAS El Toro does not provide any direct oversight of disposal of spent or excess pesticides or containers. The contractors comply with regulations governing pesticide and container disposal (40CFR 165.7 - 165.9 and 3CCR 6672 - 6684).

2.6 Training

2.6.1 Installation Department

Currently, there are three DOD-Certified Pesticide Applicators working for the Installation Department. Pesticide application training consists of three elements: apprenticeship training,

correspondence training, and formal classroom training. Written exams are required for the correspondence and classroom training, and re-certification is required every 3 years.

Apprenticeship Training

Apprenticeship training is conducted under the supervision of an experienced DOD-certified individual. The training program is tailored on the specific pest control requirements of the anticipated work place and will include, but not be limited to, the following:

- Pest and problem identification
- Shop operation
- Program planning
- Equipment maintenance
- Selection of controls
- Safety and first aid
- Equipment operation
- Pesticide formulation and application techniques
- Record keeping and reporting
- Pesticide disposal and security
- Pesticide handling (storage, mixing, and transportation)
- Pest control operations.

Apprenticeship culminates in an on-site practical evaluation of the trainees competency and progress.

Correspondence Training

Within three months of assignment as a trainee, the individual shall be enrolled in a WESTNAVFACENGCOM-approved correspondence training course. The course must be

completed within six months of the class enrollment, and successful completion of the course is a prerequisite to formal classroom training.

Formal Classroom Training

Following successful completion of the correspondence training, formal classroom training must be obtained at an approved DOD training center (See Appendix D, Enclosure (1)). Students must pass both the core and category portions of the training. The core training is a prerequisite to the category training and provides basic information common to all pesticide applicators and pest control supervisors. The DOD pest control category training may consist of one or several of the following:

- Forest
- Ornamental and turf
- Aquatic
- Right-of-way
- Industrial, institutional, structural, and health related
- Public health
- Demonstration and research
- Aerial application.

In the past, additional training of the pesticide applicators has included completion of the Hazardous Materials Storage and Handling course and the Hazardous Waste Management course. This training has lapsed and it is recommended that the Installation Department immediately re-certify each certified pesticide applicator in these courses.

Enclosure (1) in WESTNAVFACENGCOM Instruction 6250.1C (see Appendix D) discusses the DOD Pesticide Applicator Certification Program.

2.6.2 Agricultural Outlease Farmers

In order to apply pesticides to their crops, the agricultural outlease farmers must employ a state-certified pesticide applicator or advisor, and the farmers must have a written training program for employees who handle pesticides, and must provide field training for each of these employees.

State of California Certified Pesticide Applicator/Advisor

The minimum qualifications for a 2-year certified pesticide applicator/advisor license and outlined in 3CCR 6550, and include:

- Bachelor's Degree (BA or BS) in the Agricultural Sciences, Biological Sciences, or Pest Management; or
- 60 semester units (90 quarter units) of college level curriculum in the Agricultural Sciences, Biological Sciences, or Pest Management, plus 24 months of technical experience as an assistant to a licensed agricultural pest control advisor or other equivalent experience.

Further specifics on the types of acceptable course work and technical experience are covered in 3CCR 6550.

The applicant must also pass an examination on the laws and regulations governing pesticide use, and the safety precautions necessary to prevent injury (3CCR 6504). Several types of examinations are offered that may qualify the applicant to work in one or more of the following categories (3CCR 6530):

- Residential, industrial, and institutional pest control
- Landscape maintenance pest control
- Right-of-way pest control

- Agricultural pest control (plant)
- Agricultural pest control (animal)
- Forest pest control
- Aquatic pest control
- Regulatory pest control
- Seed treatment
- Demonstration and research
- Health-related pest control.

Continuing education requirements are required for recertification (3CCR 6511 - 3CCR 6514).

Employee Training

In the State of California, employers are required to provide training and a written training program for employees who handle pesticides (3CCR 6724). The written program shall describe the materials (e.g., study guides, pamphlets, pesticide labels, Pesticide Safety Information Series (PSIS) leaflets, Material Safety Data Sheets (MSDS), slides, video tapes) and information that will be used to train the employees.

The annually conducted training shall include:

- Hazards involved with exposure to pesticides
- Safety procedures to be followed, and the clothing and protective equipment to be used
- Procedures for handling non-routine tasks or emergency situations, the ways poisoning can occur, decontamination, poisoning symptoms, and where to obtain medical treatment
- Purposes and requirements of medical supervision
- Applicable laws, regulations, MSDS, PSIS leaflets, label requirements
- Employee rights
- Location of the written Hazard Communication Program, pesticide use records, PSIS leaflets, MSDSs, and exposure, monitoring, and training records.

MCAS El Toro is not responsible for the training of employees of the agricultural outlease farmers. The State Department of Agriculture provides oversight of training.

2.6.3 Contractors

The training and certification requirements for contractors are the same as for the farmers. Section 2.6.2 discusses these requirements. MCAS El Toro only reviews contractor permits, insurance and training records when a contract is being written. No training is provided by MCAS El Toro.

2.7 Spills

Pesticide spills at MCAS El Toro are covered in three documents:

- The Armed Forces Pest Management Board has produced Technical Information Memorandum Number 15 (TIM 15), entitled "Pesticide Spill Prevention and Management" (June 1992). Included as Appendix F of this report, TIM 15 discusses spill prevention, spill contingency planning and spill emergency procedures. TIM 15 is a general document that is supplemented by the other two documents developed below.

- The site-specific Oil and Hazardous Substance Spill Prevention, Control and Countermeasure (SPCC) Plan

- The Oil and Hazardous Substance Spill Contingency Plan (SCP).

These latter two plans have been updated in January 1994 and are available through the MCAS El Toro Environmental Office. TIM 15 is available through the Environmental Office and at each pesticide storage area.

In general, spill emergency procedures include:

- Identification

The pesticide involved must be identified and information such as formulation, percent active ingredient, and manufacturer's name and address should be obtained.

- Safety and First Aid

Proper training of pesticide users includes basic first aid and evacuation procedures. First aid kits and personal protective equipment should be maintained at pest control shops, storage areas, and vehicles. Emergency telephone numbers should be posted and readily available.

- Care of Injured

The immediate concern following a spill is to minimize contamination of personnel and the following basic procedures should be followed as rapidly as possible:

1. Assess the spill to determine if personnel are involved.
2. Eliminate all sources of ignition.
3. The rescuer should wear protective equipment and remove the injured to a safe location.
4. Remove contaminated clothing from the victim and/or rescuer, wash affected areas of body, and administer first aid.
5. Obtain medical assistance.

- Site Security

The spill site should be secured from entry by any unauthorized personnel by roping off the area and posting signs.

- Containment and Control

  Spilled pesticides must be contained at the original site of the spill. The pesticide must be prevented from entering storm drains, wells, water systems, and ditches.

- Pesticide Spill Reporting

  Spills that involve pesticides equal to or exceeding the designated reportable quantity specified in EPA's Clean Water Act list of hazardous substances and the CERCLA list of hazardous substances must be reported. See Appendix F of this report for the compiled list. Spills should be reported to the designated spill coordinator for the base or installation.

- Cleanup

  Adequate cleanup of spilled pesticides is essential in order to remove any health or environmental hazards. For dry spills (powders, dusts, or granular materials) the pesticide should be covered, then carefully swept up while systematically removing the cover. The collected pesticide should be placed in plastic or metal containers. Liquid spills should be cleaned up by placing an appropriate absorbent material over the spilled pesticide. Collect spent absorbent and place in a properly labeled, leak proof container.

- Decontamination

  All spilled pesticide must be removed from soil, surfaces, tools, vehicles, and equipment. Chlorine bleach, caustic soda, lime, or sodium hypochlorite may be used to effectively decontaminate spill areas, depending on the specific pesticide spilled. The neutralized pesticide and chemical decontaminant need to be cleaned up following decontamination.

- Disposal

  All contaminated materials that cannot be effectively decontaminated must be removed and placed in sealed leak proof containers which must then be handled as hazardous waste. This requires proper labeling, manifesting, transportation, and disposal.

2.8 Worker Safety and Health

The OSHA Hazard Communication Standard (HAZCOM) (29 CFR 1910.1200 and 3CCR 6723) requires that all personnel working with hazardous materials, such as pesticides, be given specific training, that MSDSs be available, and that a Hazard Communication Plan (HCP) be developed at each installation.

Worker safety and health also includes:

- Industrial hygiene
- Personal protective equipment
- Medical examinations
- Pesticide labels
- Material Safety Data Sheets (MSDSs)
- Training.

2.8.1 Industrial Hygiene

Pest control operations shall be thoroughly evaluated to accurately identify and quantify potential health hazards. Components of the industrial hygiene evaluation include work place assessment, exposure assessments, monitoring records, and exposure evaluation. California regulations that apply to records regarding pesticide use, accident reports and pest control records can be found in 3CCR 6624 through 3CCR 6636. Section 3CCR 6732, 6734, 6740, and 6742 require an appropriate change area, washing facilities, adequate light and safe equipment, respectively.

2.8.2 Personal Protective Equipment

According to Sections 3CCR 2452.1 and 6738, the employer shall provide and maintain all protective clothing and equipment for employees. The protective equipment shall be maintained and kept in a clean, specially designed place or locker when not in use.

2.8.3 Medical Supervision

According to 3CCR 6726 and 6728, the emergency medical care shall be planned for in advanced and specific medical surveillance for personnel engaged in routine pest control operations shall be performed.

2.8.4 Pesticide Labels

Sections 3CCR 6235 through 3CCR 6243 describe the information that must be included on each pesticide label. In particular, warning or caution statements that are adequate to prevent injury must be provided.

2.8.5 Material Safety Data Sheets (MSDSs)

According to 3CCR 6724, MSDSs must be available to employees who handle pesticides. The MSDSs provide detailed information on the contents of pesticide, the dangers of the pesticide, and the treatment for over exposure to the pesticide.

2.8.6 Training

Training is covered in Section 2.6 of this report.

2.9 Wastewater Discharges

The discharge of wastewater from any pesticide formulation, mixing, or equipment cleanup area is prohibited unless permitted under a NPDES permit. At MCAS El Toro, pesticides are properly managed and handled to prevent all wastewater discharges. As discussed in Section 2.7 (Spills), the rinsate from the cleaning of pesticide containers is recovered and reused.

3.0 REGULATIONS

3.1 Introduction

Pesticide use at MCAS El Toro is regulated according to federal, state, DOD, and MCAS El Toro regulations. Each of the major applicable regulations will be discussed below, and a summary is presented in Table 3-2 at the end of the chapter. Appendices C through F include the applicable text of several of these regulations.

3.2 Federal

3.2.1 Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

FIFRA was passed in 1947 in order "to regulate the marketing of economic poisons and devices." This Act, as codified in 40 CFR 150 through 40 CFR 189 requires:

- Product registration and applicator certification
- Labels on each container of pesticides with instructions for storage, use, and disposal
- A valid EPA registration number for any pesticides purchased or distributed
- Pesticide application, storage and disposal are performed in a manner consistent with applicable regulations.

3.2.2 Resource Conservation and Recovery Act (RCRA)

Pesticides, pesticide equipment, and pesticide containers are integrated in the hazardous waste management criteria of RCRA. Unrinsed pesticide containers must be treated as hazardous waste, but all pesticide containers used at MCAS El Toro are rinsed, and disposed of accordingly as municipal waste. RCRA prohibits land disposal of waste pesticides unless they meet the treatment standards set forth by EPA under 40 CFR 268 which require a reduction in the toxicity or likelihood of migration of the waste after disposal.

3.2.3 Clean Water Act (CWA)

Pesticides are regulated through the NPDES permitting program to protect surface waters from contamination due to pesticides in wastewater discharges and land runoff. Details on spills, spill prevention, and wastewater discharges are covered in Sections 2.7 and 2.9 under pesticide management at MCAS El Toro.

3.2.4 Emergency Planning and Community Right-to-Know Act (EPCRA)

EPCRA requires protection, emergency planning, and notification of communities in the event of a release of a toxic chemical. Several pesticides are included on the list of toxic chemicals that require notification following a release. The pesticides on this list that are used at MCAS El Toro are discussed below.

Only nine of the 140 pesticides included in the list of toxic chemicals are used at MCAS El Toro. In most cases, the amount stored at any give time is below the reportable quantity for a spill. Therefore, EPCRA will likely not be triggered through pesticide storage or spills at MCAS El Toro.

Table 3-1 lists the nine pesticides, their Threshold Planning Quantity (TPQ), the amount greater than that for which a special handling and storage plan must be developed, and the Reportable Quantity (RQ) for which spills greater than the listed amount must be reported to EPA.

3.2.5 Occupational Safety and Health Act

Under this act, the Occupational Safety and Health Administration (OSHA) employs personnel to help employers establish effective occupational safety and health programs which ensure that employment and places of employment are safe and healthful. The goal of OSHA is to prevent the occurrence of injuries and illnesses which may result from exposure to hazardous workplace conditions.

3.3 State

3.3.1 California Code of Regulations (CCR)

The pesticide regulations listed in 3 CCR incorporate the federal guidelines from FIFRA, but are more specific and detailed. Accordingly, the state regulations typically take precedence over the federal regulations on topics including storage, usage, disposal, applicator certification, reporting, and safety.

3.4 Department of Defense

3.4.1 Environmental Compliance and Protection Manual (MCO P5090.2)

Chapter 15 of the manual, Pesticide Pollution Prevention, discusses the commitment of the Marine Corps to "the prevention of pollution from the mixing, storage, and disposal of pesticides at Marine Corps installations." Summaries of DOD and Federal regulations are provided on topics that include worker safety and health, pesticide usage, storage, and disposal, wastewater discharges, training and certification, and spills. The manual also explicitly states the Marine

Table 3-1
Extremely Hazardous Substances (Pesticides)
Used at MCAS El Toro

Pesticide	Maximum Amount Used at MCAS El Toro	Reportable Quantity (lbs)[a]	Threshold Planning Quantity (lbs)
Aluminum phosphide	5 lb/yr	100	500
Chlorpyrifos	200 lb/yr	1	ND
2,4-D[b]	15.3 gal/yr	100	ND
Diazinon	500 lb/yr	1	ND
Dicamba[c]	1-4 gal/yr	1,000	ND
Diphacinone	2,000 lb/yr	1	10,000
Diquat	10 gal/yr	1,000	ND
Pyrethrins	10 gal/yr	1	ND
Strychnine	50 lb/yr	10	500

(a) If a final RQ has not been assigned, a statutory RQ of 1 pound applies for reporting

(b) 2,4-D is included here as a component of Trimec, a weed killer. 2,4-D accounts for 30.56%, by weight, of the Trimec. Fifty gallons of Trimec is used annually.

(c) Dicamba is included here as a component of Trimec, a weed killer. Dicamba accounts for 2.77%, by weight, of the Trimec. Fifty gallons of Trimec is used annually.

ND - Not Determined

Corps policy to comply with applicable federal, state, and local pesticide pollution prevention laws and regulations. A summary of this document is included in Table 3-1, and Chapter 15 of this manual is included in Appendix C.

3.4.2 Pest Management Policy and Procedures for Navy and Marine Corps Activities (WESTNAVFACENGCOM Instruction 6250.1C)

The major topics discussed in this instruction include pesticide applicator certification, the Annual Activity Pest Management Plan and Purchase Approval Request, pest control performed by contract, and supervision/inspection of pest control work. A summary of this document is included in Table 3-1 and the document itself is included in Appendix D.

3.4.3 MCAS El Toro and MCAS Tustin Pest Management Program (Station Order 11321.1A)

This Station-wide directive, entitled MCAS El Toro and MCAS Tustin Pest Management Program, is to implement DOD and CMC policies regarding the administration of the Pest Management Program at MCAS El Toro and MCAS Tustin. This directive reiterates Marine Corps policy with regard to pesticides and details the chain of responsibility at MCAS El Toro and MCAS Tustin for pesticide storage, use, and disposal. A summary of this document is included in Table 3-1 and the document itself is included in Appendix E.

Table 3-2
Summary of Federal, State, and DOD Pesticide Regulations

Activity	Authority	General Requirements
General Provisions		
• Federal - Unlawful Acts	FIFRA Sec. 12	• Applicable to all individuals. • Must not detach, alter, deface, or destroy, in whole or in part, any labels required by this Act. • Must allow any entry, inspection, copying of records, or sampling authorized by this Act. • Must not use any registered pesticide, classified for restricted use, for purposes other than its intended use. • Must not use any registered pesticide in a manner inconsistent with its labeling. • Must ensure that any pesticide which is under an experimental use permit is not used contrary to the provisions of that permit. • Must not use any pesticide for tests on humans unless such individuals are fully informed of the required information.
	FIFRA Sec. 13	• Applicable only to individual who owns, controls, or has custody of certain pesticides or devices. • Requires that when the Administrator of the EPA has issued a "stop sale, use, or removal" order for a certain pesticide or device - that the sale, use, or removal of that pesticide or device is not conducted, except in accordance with the provisions of the order.

Table 3-2 Summary of Federal, State, and DOD Pesticide Regulations		
Activity	**Authority**	**General Requirements**
Pesticide & Pesticide Container(s) Storage, Disposal, and Transport		
• Federal - Recommendations for Storage of Pesticides and Pesticide Containers	40 CFR 165.10 (Recommended Procedures)	• Recommended to sites and facilities that store pesticides and excess pesticides (and their containers) that are classed as highly toxic or moderately toxic and are required to bear the signal words DANGER, POISON, or WARNING, or the skull and crossbones symbol on the label. • Note: temporary storage of highly toxic or moderately toxic pesticides may be conducted under specific conditions (see 40 CFR 165.10(a)(2)). • Should select storage sites with regard to the amount, toxicity, and environmental hazard of the pesticide, and the number and sizes of containers to be handled. • Should locate sites where flooding is unlikely and where soil texture/structure and geologic/hydrologic characteristics will prevent the contamination of any water system by runoff or percolation. • Should contain drainage from site with natural or artificial barriers or dikes. • Should store pesticides in dry, well ventilated, separate room, building or covered area where fire protection is provided. • Should secure storage facility with climb-proof fence, and locks on doors and gates to prevent unauthorized entry. • Should provide identification signs, to warn of hazardous nature of pesticides, on rooms, buildings, and fences. • Should provide labels for identifying contaminated equipment items used where pesticide work is conducted. • Should provide adequate provisions for decontaminating personnel and equipment. • Should store pesticide containers with the labels plainly visible. If pesticide container is damaged, the container and product should be placed in a suitable container and relabeled and sealed. • Should classify and separate each pesticide formulation and store each group under a sign containing the name of the formulation. Should store all containers off the ground and in an orderly manner to allow access and inspection. Rigid containers should be stored upright. Should provide adequate aisle space between products in the storage area. • Should maintain an inventory of the number and identity of containers in each storage unit. • Further recommendation is provided on segregating pesticide containers in accordance with disposal suggestions.

Table 3-2
Summary of Federal, State, and DOD Pesticide Regulations

Activity	Authority	General Requirements
• CA - Storage Area Posting Requirements	3 CCR 6674	• Applicable to all pesticides except for those intended for home use when in the possession of a householder on his property. • Pesticide storage areas where containers which hold or held pesticides required to be labeled with the signal words "warning"or "danger" shall have visible warning signs posted in all directions of probable approach. Signs shall be of size that are readable at 25 feet. Signs shall state the following: DANGER POISON STORAGE AREA ALL UNAUTHORIZED PERSONS KEEP OUT KEEP DOOR LOCKED WHEN NOT IN USE • Warning signs shall be repeated in the appropriate languages other than English when it is anticipated that individuals do not understand English.
• Federal - Recommendations for Environmental Monitoring	40 CFR 165.10(h) (Recommended Procedures)	• Recommended to sites and facilities that store pesticides and excess pesticides (and their containers) that are classed as highly toxic or moderately toxic and are required to bear the signal words DANGER, POISON, or WARNING, or the skull and crossbones symbol on the label. • Environmental monitoring system is recommended to be implemented around the storage facility. Should obtain samples periodically from surrounding ground and surface water, wildlife, and plant environments. Analysis of samples should be done in accordance with suitable methodology.
• Federal - Recommendations for Container Inspection and Maintenance	40 CFR 165.10(d)(2) (Recommended Procedures)	• Recommended to sites and facilities that store pesticides and excess pesticides (and their containers) that are classed as highly toxic or moderately toxic and are required to bear the signal words DANGER, POISON, or WARNING, or the skull and crossbones symbol on the label. • Should regularly inspect containers for leaks and corrosion. • If corrosion or leak is observed, the container should be transferred to a suitable larger container and relabeled appropriately. • Should maintain sufficient detoxification and spill equipment for use during emergency treatment.

Table 3-2
Summary of Federal, State, and DOD Pesticide Regulations

Activity	Authority	General Requirements
• CA - Pesticides and Pesticide Containers	3 CCR 6670	• Applicable to all individuals storing and handling pesticides. • Must not store, handle, dispose of, or leave unattended, pesticides, empty containers, or equipment that holds or has held a pesticide, in a manner or at a place where a hazard to persons, animals (including bees), food, feed, crops or property can occur.
	3 CCR 6672	• Applicable to facilities that receive pesticides for use. • The facility operator is responsible for all containers or equipment on the property. • If containers are not under the personal care of the facility operator then a person must be provided to be responsible to maintain control over the containers at all times and to ensure that pesticide containers are stored in a locked enclosure. For liquid pesticides in containers larger than 55 gallon capacity, the container must have a lock to prevent unauthorized access.
	3 CCR 6676	• Applicable to those facilities that store or transport containers, which hold or have held any pesticide, (except specific service containers). • Containers must have a registrant's label. • All lids or closures must be securely tightened, except during certain rinsing and draining procedures.
	3 CCR 6678	• Applicable to individuals who utilize service containers other than in the business of farming when the containers are on the property of the person who is farming. • Service containers must be labeled appropriately. Labels shall have the name and address of the person or firm responsible for the container; the identity of the economic poison; the words "Danger," "Warning," or "Caution" in accordance with the label of the original container.
	3 CCR 6680	• Applicable to facilities that store or handle pesticides. • Pesticides must not be placed or kept in any container commonly used for the storage of food, drink, or household products.
	3 CCR 6684	• Applicable to facilities that have empty containers which held less than 28 gallons of a pesticide that is diluted for use. • Shall follow the rinse and drainage procedure for empty pesticide containers outlined in this section.

Table 3-2
Summary of Federal, State, and DOD Pesticide Regulations

Activity	Authority	General Requirements
• Federal - General Recommendation on Pesticide & Container Disposal	40 CFR 165.7 (Procedures Not Recommended)	• Recommended to all individuals who store or dispose any pesticides regulated by the Federal EPA (see CCR 6400). • Should not dispose of, store (or receive for disposal or storage) any pesticide, pesticide container, or pesticide container residue in a manner: that is inconsistent with the label; that causes or allows open dumping of pesticide or pesticide containers; that causes or allows opening burning of pesticides or pesticide containers (with certain exceptions, see 40 CFR 165.7(c)); that causes or allows for certain water dumping or ocean dumping; that violates any applicable Federal or State pollution control standard; and that violates any other provisions of FIFRA.
• Federal - Recommendation for Pesticide Disposal	40 CFR 165.8 (Recommended Procedures)	• Recommended to individuals disposing of certain pesticides regulated by the Federal EPA. • Organic pesticides (except organic mercury, lead, cadmium, and arsenic compounds) should be disposed of according to the following recommended procedures: incinerate in a pesticide incinerator in accordance to specific guidelines (any liquids, sludges, or solid residues generated recommended be disposed of in accordance with all applicable federal, state, and local pollution control requirements); bury in a specially designated landfill (records to locate pesticides within the landfill site should be maintained); utilize soil injection or chemical degradation procedures (do only after obtaining specific guidance from Regional Administrator of the area where intended disposal shall be conducted); place in temporary storage for disposal if approved procedures are not available (storage procedures should confirm with specific requirement - see 40 CFR 165.10); and under specific conditions or well inject the waste conditions. • Metallo-organic pesticides (except organic mercury, lead, cadmium, or arsenic compounds) are recommended for disposal in the following manner: appropriately incinerate pesticide after heavy metal recovery is conducted; under certain conditions either bury waste in specially designated landfills, dispose of by soil injection, or chemical degradation; utilize temporary storage (see 40 CFR 165.10) if adequate disposal methods are not available; conduct well injection in accordance to specific conditions (see 40 CFR 165.8(a)(6)). • Organic mercury, lead, cadmium, arsenic, and all inorganic pesticides should be disposed of by either chemical deactivation (with non-hazardous compounds) and recovery of heavy metals; encapsulated and buried in a specially designated landfill (should maintain records of burial site); or placed in temporary storage until such time disposal opportunities are available (for acceptable storage criteria see 40 CFR 165.10).

Table 3-2
Summary of Federal, State, and DOD Pesticide Regulations

Activity	Authority	General Requirements
• Federal - Recommendation for Pesticide Disposal (Continued)	40 CFR 165.3	• Applicable to owners of pesticides whose registrations have been canceled. • Must make every effort to return the material to either its manufacturer, distributor, or other agent capable of using the material prior to requesting the Administrator of EPA to accept material for disposal. Must make a formal request to the Regional Administrator, of the area where the pesticide is located, in writing (with records and data pertaining to the amount, location, physical form, type and condition of containers, manufacturers date or purchase date of individual lot) to accepts the suspended pesticide. Must also provide certification that every effort was made to return suspended material to manufacturer, distributor, or other approved agents prior to formal written request to the Regional Administrator for acceptance of the suspended pesticide. Owner is responsible for the costs related to the transport of the suspended/canceled pesticide.
• Federal - Recommendation for Pesticide Container and Residue Disposal	40 CFR 165.9 (Recommended Procedures)	• Recommendations to individuals disposing of certain pesticide containers and residue. • Combustible containers, which formerly contained organic or metallo-organic pesticides (except organic mercury, lead, cadmium, or arsenic compounds) should be disposed either in a pesticide incinerator or buried in specially designated landfills. Note: certain exceptions are made for small quantities of such containers (see 40 CFR 165.9 (a)). • Non-combustible containers, which formerly contained organic or metallo-organic pesticides (except organic mercury, lead, cadmium, or arsenic compounds) should be triple rinsed and either returned to the pesticide manufacturer or formulator, or reconditions, and/or punctured to facilitate drainage prior to transport to recycling facility. Containers may be crushed and disposed of in a sanitary landfill if in conformance with local and State regulations. Unrinsed containers should be disposed of in specially designated landfills or incinerated in pesticide incinerators. • Combustible and non-combustible containers which formerly contained organic mercury, lead, cadmium, or arsenic or inorganic pesticides may be triple rinsed, punctured to facilitate drainage, and disposed of in a sanitary landfill. Containers not rinsed should be encapsulated and buried in a specially designated landfill. • Any residue and excess liquids should be added to spray mixtures in the field utilizing the same pesticide. If not applicable, dispose of each specific type of pesticide as recommended in 40 CFR 165.8 (see above for Federal Recommendation Procedures for Pesticide Disposal).
• CA - Pesticide Transportation Requirements	3 CCR 6682	• Applicable to pesticides except those not intended for home use when in the possession of a householder on his property. • Must segregate pesticides from persons, food or feed during transport. • Ensure pesticide containers are secured to vehicles during transportation to prevent spillage onto or off the vehicle. • Ensure, when necessary, paper, cardboard, and similar containers are covered to protect against moisture.

Table 3-2
Summary of Federal, State, and DOD Pesticide Regulations

Activity	Authority	General Requirements
Employee Safety/Hazard Communication		
• Federal - General Recommendations for Safety Precautions	40 CFR 165.10(e) (Recommended Procedures)	• Recommended to sites and facilities that store pesticides and excess pesticides (and their containers) that are classed as highly toxic or moderately toxic and are required to bear the signal words DANGER, POISON, or WARNING, or the skull and crossbones symbol on the label. • In addition to the safety precautions specified on labels of pesticide containers, additional precautions on handling containers, unauthorized access or storage areas, pesticide storage, and equipment inspections are recommended. • Safety measures against the storage of foods, tobacco, eating utensils, smoking equipment are recommended for pesticide storage and loading areas. • Safety measures against putting potentially contaminated fingers in mouth or rubbing eyes while working are recommended. • Safety measures for hand washing, wearing rubber gloves, having periodic physical examinations when working regularly with organophosphate and N-alkyl carbamate.
• CA - General Standards of Safe Practice	3 CCR 6600	• Applicable to each person performing pest control. • Must use only pest control equipment that is safe to operate and in good repair; perform task carefully and in an effective manner; utilize only methods and equipment suitable for the proper application of the specific pesticide; conduct pest control under suitable climate conditions for proper pesticide application; and exercise reasonable precautions.
	3 CCR 6602 - 6610	• Applicable to facilities who use pesticides. • Must make available a copy of registered pesticide labels at each site. • Ensure pesticides are weighed or measured accurately using calibrated devices during pesticide measuring process. • Ensure a uniform mixture is maintained in both application and service rigs. • Ensure pest control equipment is cleaned to prevent injury or damage to people and the environment. • Ensure acceptable backflow protection is available on each service rig and piece of application equipment that handles pesticides and draws water from an outside source.
	3 CCR 6612	• Applicable to facilities who have pesticide applicators. • Must not allow a minor under 18 years of age to mix or load any pesticides that have the following requirements either on the label or in the regulations: requires use of air supply and respiratory protection; requires a closed system; or requires full body chemical-resistant protective clothing.

Table 3-2
Summary of Federal, State, and DOD Pesticide Regulations

Activity	Authority	General Requirements
	3 CCR 6614	• Applicable to individuals who apply pesticides, except those persons or public agency who apply vector control protection, in residential areas. • Prior to the application of pesticide, must evaluate the equipment to be used, meteorological conditions, the property to be treated and surrounding properties to determine the likelihood of harm or damage to persons, animals, and property. • Pesticide application shall not be made when reasonable hazards may occur to persons, animals and property (see 3 CCR 6614 (a)(b)(c).
	3 CCR 6616	• Applicable to all individuals other than a public agency or its contractor operating under a cooperative agreement with the Dept. of Health Services pursuant to Section 2426 of the Health and Safety Code for vector control. • Must not directly discharge a pesticide onto a property without the prior consent of the owner or operator of the property.
	3 CCR 6618	• Applicable to persons performing pest control operations and operators of properties where pest control operations are being conducted. Does not apply to a public agency or its contractor operating under a cooperative agreement with the Dept. of Health Services pursuant to Section 2426 of the Health and Safety Code for vector control. • Persons performing pest control must notify the operator of the property of the intended actions prior to the application of pesticides. • Operator of the property shall notify all persons known to be on the treated property (or are likely to be on the treated property) if any restrictions on entry into the area are in affect. • Notice must specify date of application, the identity of the pesticide by the brand name or common chemical name, and be sufficient to advise of the precautions (including reentry restriction).

Table 3-2
Summary of Federal, State, and DOD Pesticide Regulations

Activity	Authority	General Requirements
• CA - Employer-Employee Responsibility Requirements	3 CCR 6700 3 CCR 6702	• Applicable to facilities that mix, load, apply, store, transport, or otherwise handle pesticides for any use other than manufacturing, formulating or repackaging of pesticides. • Does not apply to storage and transportation of pesticides in the manufacturer's sealed or closed container. • The employer is responsible for knowing the federal and state safe use regulation on pesticide use and pesticide labeling. • Employer is responsible for providing a safe workplace for employees and for requiring employees to follow safe work practices. • Must inform employees (in a language comprehensible by the individual) of the specific pesticide being used, the type of protective clothing worn, and the equipment and work procedures to be followed. Must inform employees of pesticide safety hazards and pesticide safety regulations applicable to the activities being performed. • Employer must supervise employees to ensure that safe work practices and regulatory and labeling requirements are being complied with. • Employer may take reasonable measures to ensure that employees handle and use pesticides in accordance with regulations. • Employees are granted specific rights under Chapter 1 of Division 5 of the California Labor Code which include: filing confidential complaints of alleged unsafe work conditions; being notified of any relevant job hazards; speaking to inspectors or compliance officers; and not being subjected to any retaliation or discrimination due to employee filing any complaints regarding unsafe work conditions. • Additional employer responsibilities related to safety of employee who may enter a treated field are outlined in 3 CCR 6760.

Table 3-2
Summary of Federal, State, and DOD Pesticide Regulations

Activity	Authority	General Requirements

• CA - Hazard Communication for Pesticide Handlers	3 CCR 6723	• Applicable to employers with employees who handle pesticides.
		• Must post and maintain a copy of a completed Written Hazard Communication Program for Employees Handling Pesticides (Pesticide Safety Information Series Leaflet A-8 issued by the State) in a prominent location and in the area where the employee usually starts the work day. If there is no local copy available where the employees usually starts the workday, then the program shall be maintained in a central location at the workplace which is accessible to the employees.
		• Must maintain and make accessible, at a central location at the workplace, the following information for employees who handle pesticides:
		  • training records;
		  • copies of Pesticide Safety Information Series leaflets;
		  • Materials Safety Data Sheets for each pesticide listed in pesticide use records. Note: If MSDS is not available, send written inquiry for a copy from the registrant. If a written inquiry has been made in the last 12 months or in the last 6 months (for new, revised or later information on MSDS) the employer need not make additional inquiry. If response has not been received within 25 working days of the date of inquiry, send a copy of the inquiry, to the state, with a notation that no response has been received. The employer is not excluded from receiving a MSDS utilizing another more expedient method in lieu of that above mentioned. If MSDS is provided by the registrant, than of a copy MSDS is provided to the requester within 15 days of receipt.
		• Must inform employees, prior to handling pesticides, and at a minimum annually thereafter, of the location and availability of records and other documents relating to employee training, monitoring, and potential exposure. If location of records change, employees must immediately be notified.
		• Must provide access to the employees, employee representative, or employee's physician upon request any records or other documents required to be posted or maintained.
		• Separate hazard communication requirements are outlined in 3 CCR 6761 for field workers. In addition, specific requirements on field work during pesticide application are outlined in 3 CCR 6762 for field workers and other employees.

Table 3-2
Summary of Federal, State, and DOD Pesticide Regulations

Activity	Authority	General Requirements

• CA - Employee Training Requirements	3 CCR 6724	• Applicable to employers with employees who handle pesticides.
		• Must have a written training program for employees who handle pesticides.
		• The training program must describe the materials (e.g., study guides, MSDSs, pamphlets, pesticide labels, slides, video tapes) and other information that will be provided and used to train employees.
		• The written training program must provide training so that each employee who handles pesticides understands the following for each pesticide to be used:
		  • Immediate and long-term hazards involved, including the hazards associated with exposure to pesticides with known or suspected chronic effects as identified in MSDSs, pesticide labeling and/or Pesticide Safety Information Series leaflets;
		  • Safety procedures to be followed, engineering controls to be used, and clothing and protective equipment to be used;
		  • Procedures for handling non-routine tasks or emergency situations, ways poisoning or injury from pesticides can occur, the importance of immediate decontamination of skin and eyes after exposure incidence, common symptoms associated with pesticide poisoning, and where to obtain emergency medical treatment;
		  • If agricultural commodity is produced, provide information on the importance of medical supervision if toxicity category one or two organophosphate or carbamate pesticides are handled;
		  • Applicable laws, regulations, MSDSs, Pesticide Safety Information Series leaflets and label requirements;
		  • Employee's rights to personally receive information regarding pesticides to which they may be exposed and rights against discharge or other discrimination due to the exercise of their rights; employee's physician or employee representative must be allowed to receive information regarding pesticides to which the employee may be exposed;
		  • Location of the written Hazard Communication Program (Pesticide Safety Information Series leaflet A-8), pesticide use records, MSDSs, employee exposure and monitoring and training records.
		  • training must be completed prior to allowing employee access to pesticides; training shall be continually updated to cover any new pesticides that will be handled; training shall be repeated at a minimum annually thereafter; note: initial training may be waived if employee is certified commercial applicator or submits record that training was received within the last year and a letter form the previous employer documenting satisfactory work practices;
		  • Must record the date and extent of initial and annually required training given to employees and the job to be assigned; records must be verified by the employee's, employer's and trainer's signatures; must retained records in a central location at the workplace that is accessible by the employees,
		• Must maintain a copy of the training program for two years at a central location at the workplace accessible to employees.
		• Separate employee training requirements are outlined in 3 CCR 6764 for field work supervisors.

Table 3-2
Summary of Federal, State, and DOD Pesticide Regulations

Activity	Authority	General Requirements
• CA - Recordkeeping and Reporting Requirements	3 CCR 6624 3 CCR 6627	• Applicable to all pesticide applicators applying any pesticide. • Record must include the following information: date of pesticide application; name of the operator of the property treated; location of treated property; crop commodity, or site treated, total acreage or units treated at the site; and pesticide including the EPA or State registration number (from the pesticide label). • Submit a Monthly Summary Pesticide Use Report, to the county commissioner. The report must be on Department form (see 3 CCR 6627.1).
• CA - Emergency Medical Care Requirements	3 CCR 6726	• Applicable to employers that have employees handling pesticides. • Must plan and locate in advance where emergency medical care will be provided for those employees handling pesticides. • Must post in a prominent place at the work site, or work vehicle (if no designated work site is present) the name, address, and telephone number of a facility able to provide emergency medical care whenever employees handle pesticides; if the identified facility is not reasonably accessible from that work location, procedures to be followed to obtain emergency medical care must be posted. • Must ensure that employee is taken to a physician immediately when there are reasonable grounds to suspect that an employee has a pesticide related illness or when an exposure incidence has occurred that may reasonably be expected to lead to employee's illness. • Separate emergency medical care requirements and other requirements are outlined in 3 CCR 6766, 6770, 6772, 6776 and 6778 for field employees and field reentry after pesticide application, and recordkeeping.
• CA - Clothes Change Area Requirements	3 CCR 6732	• Applicable to certain employers who use employees to regularly handle pesticides in toxicity categories one or two. • Not applicable when only vertebrate pest control baits, solid fumigants (including aluminum phosphide, magnesium phosphide, and smoke cartridges), insect monitoring traps or non-incidental lures are handled and when only antimicrobial agents or pool and spa chemicals are handled. • Must provide an area where employees may change clothes and wash themselves at the end of their workday. • Must provide clean towels, soap, and adequate water flow to allow for thorough washing. • Must instruct employees to thoroughly shower with warm water and soap as soon as possible after the end of each work shift. • Must provide a clean, pesticide-free place where employees may store any personal clothing not in use while at work handling pesticides.

Table 3-2
Summary of Federal, State, and DOD Pesticide Regulations

Activity	Authority	General Requirements
• CA - Washing Facility Requirements	3 CCR 6734	• Applicable at facilities where mixing or loading of pesticides in toxicity categories one or two occurs. • Must provide clean water, soap and towel(s) for routine washing of hands and face, and for emergency washing of the entire body. • Must provide a minimum of 10 gallons of water at the beginning of each workday for one employee and a minimum of 20 gallons for two or more employees. Store this water separate from that used for mixing pesticides unless the tank holding water for mixing with pesticides is equipped with appropriate valves to prevent black flow. Any other readily available supply of clean water within 100 feet of mixing and loading operation site is satisfactory.
• Federal - Recommendations for Protective Clothing and Respirators	40 CFR 165.10(f) (Recommended Procedures)	• Recommended at sites that store pesticides and excess pesticides (and their containers) that are classed as highly toxic or moderately toxic and are required to bear the signal words DANGER, POISON, or WARNING, or the skull and crossbones symbol on the label. • When handling pesticides in concentrated form should wear protective clothing. • Contaminated garments should be removed immediately and extra sets of clean clothes should be maintained nearby. • Should protect against pesticide absorption through skin and inhalation. Appropriate respirators should be used.
• CA - Work Clothing Requirements	3 CCR 6736	• Applicable to certain employers who regularly use employees to handle pesticides in toxicity categories one or two. • Not applicable when only vertebrate pest control baits, solid fumigants (including aluminum phosphide, magnesium phosphide, and smoke cartridges), insect monitoring traps or non-incidental lures are handled and when only antimicrobial agents or pool and spa chemicals are handled. • Must provide clean work clothing for each employee. • Ensure employees are wearing clean work clothing whenever they handle pesticides. • Ensure employees change out of their work clothing and wash at the end of the work day. • Ensure that potentially contaminated work clothing is removed at the worksite or headquarters and is not taken home by employees; if employees work day does not involve return to the employer's headquarters, ensure employee removes and stores contaminated work clothing in a sealable container outside of their own living quarter for later return to employer. • Must provide for cleaning of work clothes. Must inform the person or firm doing the laundry that they will receive pesticide-contaminated clothing which should be laundered separately. • At mixing and loading sites must provide at least one change of clean work clothing per employee.

Table 3-2
Summary of Federal, State, and DOD Pesticide Regulations

Activity	Authority	General Requirements
• CA - Safety Equipment Requirements	3 CCR 6738	• Applicable to employers who own or operate pesticide mixing, loading, or application equipment. • Must provide all necessary safety equipment and provide for its cleaning, repair and replacement when necessary. Note: Clothing and equipment shall remain the property of the employer. • Ensure all personal protective equipment is maintained and kept in a clean, specially designated place or locker when not in use. • Must provide eye protection and ensure that employees wear eye protection when engaged in mixing and loading pesticides; adjusting, cleaning or repairing, mix, load, and application equipment that contains pesticide in hoppers, tanks or lines; during certain hand applications or ground applications using vehicle mounted, or towed equipment; and during flagging operations except when the flagger is in an enclosed vehicle. When eye protection is required, but pesticide labeling does not specify any particular kind, safety glasses that provide front, brow and temple protection, goggles or a faceshield must be provided. (If a respirator is also required, a full face respirator also meets the requirement of this subsection.) • Must provide gloves and ensure employees use gloves (except when a pesticide label specifies that gloves must not be worn) when employees are engaged in mixing and loading pesticides; adjusting, cleaning or repairing contaminated mix, load, and application equipment; during certain hand application and hand-held equipment operations. If the product label for the pesticide being handled does not specify the type of gloves to be used, gloves made of rubber, neoprene, or other chemical resistant material that provides equivalent or better protection shall be used. Whenever gloves are required ensure clean gloves are provided to employees each work day. • Under certain situations, when labeling or regulations specify waterproof or impervious pants and coat or a rainsuit, must provide and require the employee to wear full body chemical resistant protective clothing that covers the torso, head, arms, hands, legs, and feet. • Must provide and ensure employees use approved respiratory protection equipment when the pesticide product labeling or regulation require respiratory protection or when respiratory protection is needed to maintain employees' exposure below an applicable recognized exposure standard. The respiratory protection equipment must be approved by the National Institute of Occupational Safety and Health and/or the Mine Safety and Health Administration for the specific chemical and exposure condition. Proper selection of respirators must be made following the pesticide product labeling, or if specific instructions

Table 3-2
Summary of Federal, State, and DOD Pesticide Regulations

Activity	Authority	General Requirements
•CA - Safety Equipment Requirements (Continued)	3 CCR 6738 (Continued)	are absent, according to the guidance of the National Standard Practices for Respiratory Protection: Z88.2-1980 or the American National Standard Practices of Respiratory Protection During Fumigation: Z88.3-1993. Must adopt written operating procedures for selecting, fitting, cleaning and sanitizing, inspecting and maintaining respiratory protective equipment. Must initially and at least annually train employees who are required to wear respirators, on the need, use, sanitary care, and limitations of any respiratory equipment they are required to wear. Must train respirator user how to properly fit and test respiratory equipment. Employees with facial hair that prevents an adequate seal must not be assigned work requiring them to wear a respiratory unless they are provided with a respiratory that does not rely on a face to face-piece seal for proper operation. Ensure respirators are cleaned, repaired, maintained and stored appropriately. Must conduct monthly (or before use when occasions for possible use are more than one month apart) inspections of respirators maintained for stand-by or emergency use. Must maintain record of the most recent inspection on the respirator or in its storage container. Must inform employee that certain medical conditions may interfere with wearing of a respirator while engaged in a hazardous exposure situation. A statement shall be filed for each employee (see 3 CCR 6738 (e)(7)(a)). When air purifying-type respiratory equipment are required for protection, ensure that the air purifying elements are replaced in accordance with pesticide product labeling directions or respiratory equipment manufacturer recommendations.
	3 CCR 6742	• Applicable to facilities that use equipment for mixing, loading, or applying pesticides. • Must keep equipment in good repair and safe operating manner. • Must repair or alter equipment with any safety defect to remove the hazard before further use. • Tanks used for mixing or applying pesticides must be equipped with covers to prevent splashes and spills. • Must provide specific safety requirements for flexible hoses carrying liquid pesticides in toxicity categoric one or two (see 3 CCR 6742(b)(2)&(3)). • Tanks with a capacity of more than 49 gallons and that are used to mix or apply any liquid mixture derived form a pesticide in toxicity categories one or two are required to meet specific requirements (see 3 CCR 6742 (b)(4)(A)&(B)).
• CA - Equipment Maintenance Requirements	3 CCR 6744	• Applicable to facilities who own or operate pesticide mixing, loading, or application equipment. • Must inform employees under their control who are involved in the cleaning, servicing or repair of that equipment of the hazards of the pesticides and the methods of protecting against personal injury. Must provide employee with necessary protective equipment, instruction and supervision in the maintenance and operation to reduce work hazards. • If cleaning, servicing or repairing is performed by persons not under the control of the owner/operator of the equipment, he must notify the person performing the service of the hazards of the pesticides and the methods of protection.

Table 3-2
Summary of Federal, State, and DOD Pesticide Regulations

Activity	Authority	General Requirements
• CA - Closed System Requirements	3 CCR 6746	• Applicable to employers who have employees using certain pesticides in toxicity category one for the production of an agricultural commodity. • Must provide a closed system for employees during mixing or loading of pesticides in toxicity category one.
• CA - Adequate Light Requirements	3 CCR 6740	• Applicable to facilities who have employees conducting mixing/loading of pesticides. • Must provide artificial light to sufficiently allow employees to read the label and work in a safe manner.
• Federal - Recommended Procedures for Fire Control	40 CFR 165.10(g) (Recommended Procedures)	• Recommended to sites and facilities that store pesticides and excess pesticides (and their containers) that are classed as highly toxic or moderately toxic and are required to bear the signal words DANGER, POISON, or WARNING, or the skull and crossbones symbol on the label. • Should inform the local fire department, hospitals, public health officials, and police department in writing of the hazard that may be present in the event of a fire. • Should provide the fire department with a floor plan of the pesticide storage area indicating where different pesticide classifications are regularly stored. • Should provide the fire chief with the following names and phone numbers: home phone number of individual(s) responsible for the pesticide storage area; the appropriate Regional Administrator to contact; the U.S. Coast Guard; and the Pesticide Safety Team Network of the National Agricultural Chemical Association. • Should appropriately label the outside of each storage area with "DANGER," "POISON," and "PESTICIDE STORAGE" signs. Should post outside the storage area a list of the types of chemical stored within. • The following are recommended fire fighting precautions: wear air-supply breathing apparatus and rubber clothing; avoid breathing or otherwise contacting toxic smoke or fumes; wash completely after smoke or fume exposure; contain fire fighting water within storage site draining system; take a medical exam after fighting fires involving organophosphate or N-alkyl carbamate pesticides; evacuate exposed individuals.
Pesticide-Specific Regulations		
• CA - Restriction in the use of Specific Pesticides	3 CCR Sections 2455, 2458.1, 2458.6, 2458.9, & 2458.11	• Applicable to facilities that use specific pesticides. • The following pesticides have certain restriction on use: Mercury Compounds (restriction on planting seeds) Sodium Fluoroacetate Chlordane (restrictions on citrus, grapes, and strawberries) Termiticide Phenoxy Herbicide (restriction on timberland)

Table 3-2
Summary of Federal, State, and DOD Pesticide Regulations

Activity	Authority	General Requirements
• CA - Specific Requirements for Fumigation with Certain Pesticides	3 CCR Sections 6450, 6452, 6454, & 6455	• Applicable to individuals who use specific restricted pesticides for fumigation operations. • Specific requirements and information are provided for the following chemicals that are utilized for fumigation: Chloropicrin and Methyl Bromide (for field fumigation; nursery and commodity fumigation; structural fumigation, aeration and reentry) Sulfuryl Fluoride (for structural fumigation, aeration, and reentry)
• CA - Specific Requirements for Miscellaneous Pesticides	3 CCR Sections 6456 - 6489	• Applicable to individuals who use the following restricted pesticides: Sodium Arsenite Aldicarb Propanil Phenoxy and Certain Herbicides (specified in 3 CCR 6400(m)) Paraquate Folpet 1,3-Dichloropronene and Ethylene Dibromide Propargite (Omite, Comite) Certain Cotton Harvest Aids) Ethylene Dichloride Bromoxynil Carbofuran Fenamiphoe 2,4-Dichlorophenyl P-Nitrophenyl Ether Oxydementon-Methyl (Metasystox-R) Bentazon Atazine Simazine Bromacil Diuron Promenton Bentazon (Basagran) Certain Antifouling Paints, Coatings, and Coating Additives

Table 3-2
Summary of Federal, State, and DOD Pesticide Regulations

Activity	Authority	General Requirements
Restricted Use Pesticides		
• Federal - Requirements for Restricted Pesticide Use	40 CFR 171.3 to 171.4	• Applicable to individuals who intend to utilize restricted pesticides. • Certified individuals must be present to supervise the use or possession of restricted pesticides.
• CA - Restricted Materials Use	3 CCR 6404	• Applicable to individuals who posses and utilize restricted materials. • Must possess and use restricted materials only by or under the supervision of a certified commercial applicator. Note: see specific exemptions outlined in 3 CCR 6400(r).
	3 CCR 6412 3 CCR 6616	• Applicable to facilities utilizing restricted pesticides. • A Restricted Material Permit is required for use or possession of specific restricted pesticides outlined in 3 CCR 6412. • A permit is required for possession of pesticides (listed in 3 CCR 6800(a) that can potentially contaminate groundwater. Review Pesticide Management Zones (3 CCR 6802) for applicability.
• CA - Certified Applicator Requirements	3 CCR 6406	• Applicable to certified applicators. • Must be aware of the conditions of the site where pesticide application will be conducted. Be available to direct and control the manner of pesticide application by non-certified applicators.
	3 CCR 6508 3 CCR 6511 3 CCR 6513	• Applicable to certified applicators. • Must notify the State of any changes in name, address, business organization, or any other matter shown on the application. • Certificates are non-transferable. • Must complete specific continuing education requirements outlined in the state regulations. • Maintain all continuing education records for 3 years. Records maintained include the license or certificate holder's name, license or certificate number, the title and location of the instruction, name of instructor or sponsoring organization, hours credited, and the identification code number assigned by the director or regional accreditation committee to the course or program. A certificate of course or program completion or written statement is acceptable of education recordkeeping requirements.

Table 3-2
Summary of Federal, State, and DOD Pesticide Regulations

Activity	Authority	General Requirements

• DOD - Certification of Pesticide Applicators, Appointment of Activity Pest Manager/Pest Control Coordinator, Pest Management Plan and Purchase Approved Request Forms	INST 6250.1C	• Applicable to activities served by WESTNAVFACENGCOM, SOUTHWESTNAVFACENGCOM, and EFA NORTHWEST.
		• Pesticide applicator training will include: apprenticeship training, correspondence training, and formal classroom training.
		• Recertification is required every 3 years.
		• Commercial service contract personnel must be state certified in accordance with the category in which the pesticide is to be applied.
		• Each activity that is required to have a Pest Management Plan shall designate an individual as an activity pest manager to manage and coordinate the activity pest management.
		• The Annual Activity Pest Management Plan and Purchase Approval Request Form shall be submitted to WESTNAVFACENGCOM. This form serves as the activity planning and communications document in areas that include:
		  • Scheduling pest control work
		  • Timely purchase of pesticides
		  • Coordinating the program with Natural Resources, Medical, and local advisory and regulatory agencies
		  • Providing a medium for final approval of specific pesticide applications and other non-pesticide pest control measures.

Table 3-2
Summary of Federal, State, and DOD Pesticide Regulations

Activity	Authority	General Requirements

DOD - MCAS El Toro and MCAS Tustin Pest Management Program	Station Order 11321.1A	• Applicable to MCAS El Toro and MCAS Tustin personnel, operations, and activities.
		• This order reiterates Navy and Marine Corps policy to safeguard human health and morale, maintain real property and prolong life of facilities and structures, enhance environmental quality through the protection of desirable plant and animal resources, ensure compliance with laws, and minimize reliance on chemical pest control procedures.
		• The director of Facilities Management will develop and implement a pest management program, and designate an individual as an activity pest manager to manage and coordinate the Pest Management Program.
		• The Pest Manager will:
		  • Develop, administer and coordinate the activity Pest Management Program
		  • Submit pesticide usage reports
		  • Provide proper storage and notification of storage to the Fire Department, the Environmental Office, and the Station Inspector
		  • Coordinate safety training with the Ground Safety Office
		  • Monitor pesticide use on the base
		  • Ensure environmental compliance.
		• The department heads and commanding officers of purchasing are responsible for:
		  • The safe and proper use and storage of pesticides by their subordinates
		  • Submitting the Pest Management Plan and Purchase Approval Request forms.

DOD - Environmental Compliance and Protection Manual - Pesticide Pollution Prevention	MCO P5090.2	• Applicable to all Marine Corps activities and installations. • Summarizes federal statutes on pesticide use, storage, disposal, training, and safety and health. • Requires the development of a Pesticide Management Plan. • Summarizes Marine Corps policy on pesticide pollution prevention through training, applicator certification, spill prevention and proper disposal.

4.0 REFERENCES

1. USEPA, Federal Regulations, 40CFR 150 through 40CFR 189, 1993.

2. Armed Forces Pest Management Board, Technical Information Memorandum Number 15, June 1992.

3. Military Handbook, Pest Control Facilities (MIL-HDBK 102818), July 1984.

4. State of California Regulations. 3CCR 300 through 3CCR 6900, 1993.

5. Federal Insecticide, Fungicide, and Rodenticide Act, as Amended, 1993.

6. U.S. Navy, WESTNAVFACENGCOM 6250.1C, "Pest Management Policy and Procedures for Navy and Marine Corps Activities," March 1993.

7. U.S. Marine Corps, Station Order 11321.1A, "MCAS El Toro and MCAS Tustin Pest Management Program," March 1990.

8. U.S. Marine Corps, Marine Corps Order P5090.2, "Environmental Compliance and Protection Manual," September 1991.

9. Department of Agriculture, State of California, Pesticide Safety Information Series, 1988 - 1993.

Appendix A

Pest Management Plan
and Purchase Approval Requests
for MCAS El Toro and the Station Golf Course

PEST MANAGEMENT PLAN AND PURCHASE APPROVAL REQUEST
12ND WESTDIV 6250/14 (REV. 5-78)

WESTDIV 6250 2

INSTRUCTIONS Prepare this form annually. Due at WESTNAVFACENGCOM on 1 September. Supplementary forms, if any, due 1 March.
1. Specify time of year for seasonal applications. Specify frequency for year round applications.
2. Use approved pesticide name. Add name of special commercial formulation in parentheses if needed.
3. Use one of the following as appropriate: % conc., oz./gal., lbs./100 gal., oz. or lbs./1000 sq. ft., lbs./acre, etc. Outdoor applications - state whether rate is for active ingredient (ai) or product (pr), e.g. 5 # pr/AC.
4. Use following words or abbreviations: crystal (CR), dust (D), emulsifiable concentrate (EC), granule (G), pellet (P), soluble powder (SP), solution (S), wettable powder (WP), aerosol, gas, paste, strip, bait.
5. List precautions applicable to the specific situation in which the pesticide is to be applied, e.g., do not use oil base formulation, do not use for elm leaf beetles.

This form is to facilitate annual planning and approval of the activity pest control program, and to obtain purchase approval for pesticides, pest control supplies, and pesticide dispersal equipment. (References DOD DIR 4150.7, OPNAVINST 6240.3D, Marine Corps Order P11600.8A, WESTNAVFACENGCOMINST 6250.1A

FROM (Activity name and address)
U.S.M.C.A.S. El Toro, Santa Ana, CA

TO WESTERN DIVISION (10A)
NAVAL FACILITIES ENGINEERING COMMAND
P.O. BOX 727, SAN BRUNO, CALIFORNIA 94066

PERIOD COVERED (Dates)
FROM 1 Jan 93 to 31 Dec 93

PEST CONTROL OPERATION			PESTICIDE AND APPLICATION RATE		PESTICIDE PRODUCT TO BE PURCHASED OR USED					SPECIAL PRECAUTIONS
AREA (Type of buildings or terrain to be treated)	PEST (Common Name)	TIME OR FREQUENCY (1)	COMMON NAME AND EPA NO (2)	CONC OR RATE (3)	FORM (4)	APPROXIMATE AMOUNT (lbs or gals)	CONC. (lbs/gal or %)	PROBABLE SOURCE (Std stock no. or company name)	APPROXIMATE UNIT COST	(5)
		"ITEMS SHOWN HEREIN ARE IN PRIORITY ORDER"								
I. Food Handling Bldgs.	Cockroaches (M)	Once/month building	Stickey Glue Board		(H)	720 ea		Eaton	28¢ each	All pesticides are used based on survey or inspection results.
4 Mess Facilities (121,800 SF)	Cockroaches, Ants & flies. (M)	25 treatmts per year	Knox Out2 FM PT-265 4581-335	1%	ME (H)	3 gal.	2 lbs/ gallon	Whitmire	$45.00 per gallon	
6 Clubs (129,700 SF)		39 treatmts per year	Knox Out PT-265A 499-228	1%	AER/ME (H)	60 Aero-sol cans	1%	Whitmire	$3.60 per can	
9 Snack Bars (22,000 SF)	Cockroaches and ants (M&N)	once per yr each bldg.	Staygon Boric Acid Insecticide 5481-79	95%	D (H)	20 lbs	95%	Amvac	$2.40 lb	
6 Food Storage Warehouses (755,000 SF)		Once per yr each bldg	Perma-Dust PT-240 499-220	20%	AER/D (H)	24 cans	20%	Whitmire	$3.70 per can	
		30 treatmts per year	Safrotin EC 2724-314-50809	1%	EC (H)	1.5 gallon	50%	Zoecon	$35.00 per quart	
	Cockroaches (M)	40 treatmts per year	Maxforce Roach Control System 1730-67	1.65%	Bait (H)	750	1.65%	Cyanamid	$.37 ea	Regular & Large Sizes
I. Food Handling Buildings		25 treatms per year	Tridie PT-230 499-223	13%	AER (H)	36 lbs	13%	Whitmire	$6.98 per can	
		15 treatms per year	Orthene PT-280 499-230	1%	AER (H)	5.25 gal	1%	Whitmire	$26.00 per gallon	
	Flies, Mosquitoes and Gnats. (M)	16 treatms per year	ULD BP-300 Insecticide 11540-1	3%	AER (P)	2.25 gal	3%	Microgen	$19.85 per 24 oz. bottle	

(Continue on reverse)

PEST CONTROL OPERATION			PESTICIDE AND APPLICATION RATE		PESTICIDE PRODUCT TO BE PURCHASED OR USED					SPECIAL PRECAUTIONS
AREA (Type of buildings or terrain to be treated)	PEST (Common Name)	TIME OR FREQUENCY (1)	COMMON NAME AND EPA NO (2)	CONC OR RATE (1)	FORM (4)	APPROXIMATE AMOUNT (lbs or gals)	CONC (lbs/gal or %)	PROBABLE SOURCE (Std stock no. or company name)	APPROXIMATE UNIT COST	(3)
(continued) Food Handling Buildings	Ants (N)	30 treatmts per year	Maxforce Pharaoh Ant Killer 1730-72	9%	Bait (H)	900 each bait stations	.9%	Cyanamid	$1.00 ea	
	Ants (N)	30 treatmts per year	Pro-Control Ant Baits 11540-20	.005%	Bait (H)	320 bait stations	.5%	Micro-Gen	$21.90 per bx,32 per box	
	MICE (M)	Once/month building	Sticky Glue Boards		(H)	600 ea		Atlantic Paste & Glue Company	30¢ ea	
	MICE (M)	35 treatmts per year	Talon G bait packs 10182-39	.005%	Bait (H)	2 Kg	.005%	ICI Americas Inc.	$49.43 200/box	Use in tamper proof bait stations or in locations not accessible to children,pets,domestic animals or wildlife.
	Stored Products Pests (E)	10 treatmts per year	PT565 Plus XLO 499-310	2.5%	AER (H)	3 gal	2.5%	Whitmire	$7.71 per can. 20 oz cans.	
	House Sparrows (M&E)		Tomahawk traps			2 ea		Tomahawk Live Trap Company	$35.00 ea	
II.Family Housing and Barracks 2727 Housing Units	Cockroaches (M)	126 units per month	PT565 Plus XLO 499-310	2.5%	AER (H)	240 cans	2.5%	Whitmire	$7.71 can	
	Cockroaches (M)	25 units per month	Gencor 5E 2724-304-50809	1/4 oz./ MSF	EC (H)	300/ 7.5 ML	65.7%	Zoecon Corp.	$34.08 per box. 10 per box	
	Fleas&Cockroaches (M)	60 units per month	Safrotin EC 2724-314-50809	.5% & 1%	EC (H)	5 gal	50%	Zoecon Corp	$35.00 per quart	
	Cockroaches (M)	25 units per month	Maxforce Roach Control system 64248-1	1.65%	Bait (H)	720 bait stations	1.65%	Cyanamid	$.37 each	
	Cockroaches and Silverfish (M&E)	115 unts per year	Perma-Dust PT-240 499-220	20%	AER (H)	120 lbs	20%	Whitmire	$4.15 lb	
	Ants (N)	20 units per month	Knox Out 2FM PT265 4581-335	1%	ME (H)	5 gal	2 lbs/ gallon	Whitmire	$45.00 per gallon	
	Ants (N)	10 units per month	Knox Out PT-265A 499-228	1%	AER (H)	240 cans	1%	Whitmire	$3.60 per can	

(Continue on reverse)

PEST CONTROL OPERATION			PESTICIDE AND APPLICATION RATE		PESTICIDE PRODUCT TO BE PURCHASED OR USED					SPECIAL PRECAUTIONS
AREA (Type of buildings or terrain to be treated)	PEST (Common Name)	TIME OR FREQUENCY (1)	COMMON NAME AND EPA NO (2)	CONC OR RATE (3)	FORM (4)	APPROXIMATE AMOUNT (lbs or gals)	CONC (lbs/gal or %)	PROBABLE SOURCE (Std stock no. or company name)	APPROXIMATE UNIT COST	(5)
Family Housing & Barracks continued	Ants (N)	10 units per month	Maxforce Pharaoh Ant Killer 1730-72	.9%	Bait (H)	1 lb	.9%	Cyanamid	$312.00 per pound	
			Dursban PT-270 499-147	.5	AER	36 cans	.5%	Whitmire	$6.11 per can	
	Mice & Rats (M, E, N.)	20 units	Sticky Glue board		(H)	1440 ea		Atlantic Paste and Glue Company	30¢ each	
		3 units	Talon G bait packs 10182-39	.005%	Bait (H)	10KG	.005%	ICI Americas Inc.	$49.43 * 200/box	*Use in tamper proof bait stations or in locations not accessible to children, pets, domestic animals or wildlife.
		2 units per month	Weather Blok 10182-48	.005%	Bait (H)	10KG	.005%	ICI Americas Inc.	$62.82 * 500/box	
	Fleas, Ants, Earwigs and Crickets (M&N)	7 units per month	G-C Dursban 2.5G 10370-54-432	2.5%	G (H)	500 lbs	2.5%	Roussel Bio Corp	$52.00 50 lbs	
	Crickets & Ants (N)	7 units per month	Baygon 2% Bait 3125-121	2%	Bait (H)	10 lbs	2%	Mobay	$23.59 5 lbs	
	Cockroaches and Fleas (M & N)	10 units per month	Torus 2E 100-724	10-30 ML Per gallon	EC (H)	360 ML	24.37	Ciba-Geigy	$36.26 15/10 ml.	
		5 units per month	Cynoff EC 279-3081	.1 - .2%	EC (H)	1 gallon	24.8	FMC	$43.87 per quart	
	Spiders (N)	120 treatmts per year	CB-580 Fogger 9444-20	.5	AER (H)	30 lbs	.5	Cline-Bunckner	$4.72 9 oz.can	
III. Pest Control in Medical & Child Day-Care Facilities	Ants (N)	20 treatmts per year	Maxforce Ant Killer Bait Station 64248-2	1%	Bait (H)	600 ea.	1%	Maxforce Insect Control Systems	$.65 ea.	
4 Medical Clinics (96,000 SF)	Fleas (M&N)	5 treatmts per spring	Safrotin EC 2724-314-50809	.25%	EC (H)	1 lb	.25%	Zoecon Corp	$315 per pound	Use with deodorizer to reduce chemical odor.
5 Child Day-Care Facilities (?SF)			Precor 1% EC 2724-352-50809	2/3 oz. per MSF	EC (H)	1/4 gal	1%	Zoecon Corp	$35.00 per quart	

(Continue on reverse)

PEST CONTROL OPERATION			PESTICIDE AND APPLICATION RATE		PESTICIDE PRODUCT TO BE PURCHASED OR USED					
AREA (Type of buildings or terrain to be treated)	PEST (Common Name)	TIME OR FREQUENCY (1)	COMMON NAME AND EPA NO (2)	CONC OR RATE (3)	FORM (4)	APPROXIMATE AMOUNT (lbs or gals)	CONC (lbs/gal or %)	PROBABLE SOURCE (Std stock no. or company name)	APPROXIMATE UNIT COST	~~SPECIAL~~ PRECAUTIONS (5)
continued: Pest Control in Medical and Child Care Facilities	Cockroaches (M & E)	5 treatmts per year	Maxforce Roach Killer Bait Station 64248-1	2%	Bait (H)	399 ea.	2%	Maxforce Insect Control Systems	$.50 ea.	
4 Medical clinics (96,000 SF) cont: 3 Child Day Care Facilities cont: (? SF)		15 treatmts per year	Safrotin Aerosol 2724-340-50809	1%	AER (H)	24 lbs	1%	Zoecon	$6.93 per 32 oz. can	
	Rats & Mice (M & E)	20 treatmts per year	Sticky Glue Boards		(H)	144 ea		Victor	23¢ each	
IV. Airfield Vertebrate Pest Control (1588 AC)	Ground Squirrels & Mice (M & E)	Fall months	Rodent Bait Diphacinone CA 10965-50003	.01%	Bait (H)	2000 lbs	.01%	CA Dept. of Food and Agriculture	$2.00 per pound	
			Fumitoxin tablets 5857-1	2-4 tablets per burrow	FUM (H)	5 lbs	55%	Pestcon Systems Inc.	$31.83 500 tablets	Do not apply within 15 feet of occupied structures
	House Sparrows & Starlings (M & E)	Winter months	Avitrol Corn Chops 11649-6	.5%	Bait (H)	5 lbs	.5%	Avitrol Corp	$147.51 5 lb box	
	Pigeons (M & E)		Live traps		4 ea			Tamahawk Live Trap Company	$50.00 each	
V. Office Buildings and Office Spaces	Cockroaches (N)	40 bldgs per year	Gencor Plus Fogger 2724-346-50809	.55%	AER (H)	6 gal	.55%	Zoecon	$4.10 per can	
		50 bldgs per year	Borid 44313-4	99%	D (H)	10 lbs	99%	R-Value	$1.35 per pound	
	Mice & Cockroach survey (M&N)	350 bldg per year	Stick Glue Boards		(H)	730 ea		Atlantic Paste and Glue Company	30¢ each	
	Fleas (M&N)	Summer/ once year	Precor Plus Fogger 2724-337-50809	.575%	AER (H)	360 each	.575%	Zoecon	$5.76 can	
	Ants (N)	Once/year	Maxforce Pharaoh Ant Killer 1730-72	.9%	Bait (H)	250 ea.	.9%	Cyanamid	$1.25 ea.	
		250 bldgs per year	Knox Out PT-265A 499-228	1%	AER (H)	60 Aero cans	1%	Whitmire	$3.60 per can	
	Spiders and Flies (M&N)	15 bldgs per year	ULD BP-300 11540-1	3%	AER (P)	1 gal	3%	Microgen	$19.85 per 24 oz bottle	

(Continue on reverse)

PEST CONTROL OPERATION			PESTICIDE AND APPLICATION RATE		PESTICIDE PRODUCT TO BE PURCHASED OR USED					
AREA (Type of buildings or areas to be treated)	PEST (Common Name)	TIME OR FREQUENCY (1)	COMMON NAME AND EPA NO (2)	CONC OR RATE	FORM (4)	APPROXIMATE AMOUNT (Unit or size)	CONC (Unit per gal or %)	PROBABLE SOURCE (Subsidiary or company name)	APPROXIMATE UNIT COST	SPECIAL PRECAUTIONS (5)
VI. Industrial Buildings and Aircraft Hangers.	House Sparrows (M&E)	60 treatms per year	Avitrol Corn Chops 11649-6	.5%	Bait (H)	5 lbs	.5%	Avitrol Corp	$1.47 per 5 lb can	
	Ants & Cockroaches and Crickets (N)	20 treatmts per year	Knox Out 2FM 4581-335	1%	ME (H)	2 gal	2 lb/ gallon	Whitmire	$45.00 per gallon	
		30 treatmts per year	Baygon 2% Bait 3125-121	2%	Bait (H)	10lbs	2%	Bayer	$23.59 per 5 lb box	
	Mice & Rats (M&E)	10 treatmts per year	Talon G Bait Packs 10182-39	.005%	Bait (H)	1KG	.005%	ICI Americas Inc	$49.43 per 200/box	Use in tamper proof bai stations or areas inaccessible to childre and wildlife.
	Pigeons (M & E)		Tomahawk Traps			2 ea		Tomahawk Live Trap Company	$45.00 each	
	Cats, Possoms; Skunks and Racoons (N)		Tomahawk Traps			9 ea		Tomahawk Live Trap Company	$50.00 to $300.00 each	
VII. Sewers, Boiler rooms and utility valts	Cockroaches (M & N)	Spring	Chlorpyrifos Empire 20 62719-88	.5%	ME (P)	15 gal	20%	Dow Elanco	$17.08 Pint	
	Cockroaches (M & N)	Spring	Maxforce Roach Killer Bait Gel 64248-5	2.15%	Bait (H)	20 lbs	2.15%	Maxforce Insect Control Systems	Unknown at this time	
VIII. Industrial Areas Weed and Vegetation Control	Grassy & Broad-leaf Weeds (E)	Winter/ Spring	Round-Up 524-445	1 - 2%	EC (H & P)	20 gal	4 lbs/ gallon	Monsanto	$112.64 1.5 gal	
			Oust 352-401	1 -12 oz./ AC	DF (P)	10 lbs	75%	Dupont	$472.49 3 lbs	
			Princep 80W 100-437	15 lb/AC	WP (P)	400 lbs	80%	Ciba Geigy	$19.00/ 5 lbs	
			Spike 80W 1471-97	5 lb/AC	WP (P)	40 lbs	80%	Dow Elanco	$102.20/ 4 lbs	
			Krovar I 352-352	19-40 lbs/ AC	DF (P)	50 lbs	80%	Dupont	$60.69/ 6 lbs	
			Diquat 239-1663	1 - 2 quart per 100 gal	S (P)	10 gal	35.3%	Valent	$84.35 per gallon	Use until supply is exhausted. Secure
			No Foam B 50775-50008	3 pints per 100 gallons	S (P)	20 gal	25%	Creative Marketing and Research	$11.56 per gallon	sprayed areas until dry
			Blazon	.75 oz.per 1000 SF	S (P)	40 lbs	100%	Milliken Chemicals	$102.40/ 20 lbs	
IX.Ornamental Plants; Turf, Trees	Wasp & Bee's (M & N)	Summer thru Fall	Purge Wasp & Hornet Jet Freeze 9444-98	.763	AER (H)	180 lbs	.763	Cline Buckner	$5.80 per pound	

PEST CONTROL OPERATION			PESTICIDE AND APPLICATION RATE		PESTICIDE PRODUCT TO BE PURCHASED OR USED					SPECIAL PRECAUTIONS
AREA (Type of buildings or terrain to be treated)	PEST (Common name)	TIME OR FREQUENCY (1)	COMMON NAME AND EPA NO (2)	CONC OR RATE (3)	FORM (4)	APPROXIMATE AMOUNT (lbs or gals)	CONC (lbs/gal or %)	PROBABLE SOURCE (Std stock no. or company name)	APPROXIMATE UNIT COST	(5)
IX. Ornamental Plants; Turf and Trees	Ants & Fleas (M & N)	Summer/ Fall	Diazinon 5G 10370-44-432	5%	G (H)	500 lbs	5%	Gold Crest	$34.42 per 50 lbs	
			Dursban 2.5G 10370-54-432	2.5%	G (H)	250 lbs	2.5%	Gold Crest	$52.50 per 50 lbs	
			Dursban 2.5G 10370-54	2.5%	G (H)	250 lbs	2.5%	Fords Chemical	$46.59 per 50 lbs	
	Ants, Fleas, Flies & Oakworms (M & N)	Summer	Pageant DF Chlorpyrifos 62719-163	1-1/3 oz. per gallon	DF (P)	5 lbs	50%	Dow Elanco	$66.08 per 5 lbs	
	Flies (M & N)	Summer	Flytec 2724-274-50809	1.025%	Bait (H)	10 lbs	1.025%	Zoecon	$16.60 per 5 lb can	
	Pocket Gophers (N)	Winter/ Summer	Gopher Getter Strychnine TypeI 36029-1	.35%	Bait (H)	50 lbs	.35%	Wilco	$7.46 per 685 GM Jar	
	Spiders and Crickets (N)	Summer	Cynoff EC 279-3081	.1 - 2%	EC (H)	1 gal	24.8%	FMC	$43.87 per quart	
X. Wooden Structures	Termites (E)	20 treatmts per year	Tim-Bor 1624-39	10%	WP (P&H)	200 lbs	98%	U.S.Borax	$1.82 per pound	
	Subterranean Termites (E)	5 treatmts per year	Dursban TC 464-562	1%	EC (P)	5 gals	42%	Dow Elanco	$69.68/ gallon	
	Drywood Termites	20 treatmts per year	Tridie PT230 499-223	4.3%	AER (H)	25 lbs	4.3%	Whitmire	$6.87 lb	

NON-PESTICIDE PEST MANAGEMENT PRACTICES TO BE UNDERTAKEN (e.g., ADMINISTRATIVE PRACTICES - Promulgation of sanitation procedures to prevent fly breeding on loading docks, cancellation of agricultural outleases to prevent mosquito breeding sources; LIAISON - establishment of area cooperative weed or rodent control plans with local agencies; ENVIRONMENTAL MODIFICATION - installation of welded wire on magazine tops to prevent ground squirrel burrowing, water drainage to prevent seagulls at air fields; BIOLOGICAL CONTROL - installation of mosquito fish for mosquito control, use of bacteriological disease spores to control oak moths; CULTURAL PRACTICES - destruction of tomato crop residues to prevent fly populations, removal of ice plant to destroy mice harborages.)

NAME (Typed) AND SIGNATURE OF PEST CONTROL COORDINATOR	DATE	NAME (Typed) AND SIGNATURE OF PUBLIC WORKS OR MAINTENANCE OFFICER	DATE	NAME (Typed) AND SIGNATURE OF ACTIVITY MEDICAL OFFICER	DATE
James J. Green, Pest Controller	Jan 14, 93	PAUL W. SHERWOOD	Jan 14, 93	C.A. NATHAN III, LT, MSC USN	

12NO WESTDIV 6250/14 (REV. 1-78) (BACK)

PEST MANAGEMENT PLAN AND PURCHASE APPROVAL REQUEST
(2ND.WESTDIV 6250/11 (REV. 5-78))

WESTDIV 6250/1

INSTRUCTIONS: Prepare this form annually. Due at WESTNAVFACENGCOM on 1 September. Supplementary forms, if any, due 1 March.

1. Specify time of year for seasonal applications. Specify frequency for year round application).
2. Use approved pesticide name. Add name of special commercial formulation in parentheses if needed.
3. Use one of the following as appropriate: % conc., oz./gal., lbs./100 gal., oz. or lbs./1000 sq. ft., lbs./acre, etc. Outdoor applications - state whether rate is for active ingredient (ai) or product (pr), e.g. 5 # pr/AC.
4. Use following words or abbreviations: crystal (CR), dust (D), emulsifiable concentrate (EC), granule (G), pellet (P), soluble powder (SP), solution (S), wettable powder (WP), aerosol, gas, paste, strip, bait.
5. List precautions applicable to the specific situation in which the pesticide is to be applied, e.g., do not use oil base formulation, do not use for elm leaf beetles.

This form is to facilitate annual planning and approval of the activity pest control program, and to obtain purchase approval for pesticides, pest control supplies, and pesticide dispersal equipment. (References DOD DIR 4150.7, OPNAVINST 6240.3D, Marine Corps Order P11000.8A, WESTNAVFACENGCOMINST 6250.1A

FROM (Activity name and address)
Golf Course, US Marine Corps Air Station, El Toro, Santa Ana, CA 92709

TO WESTERN DIVISION (10A)
NAVAL FACILITIES ENGINEERING COMMAND
P.O. BOX 727, SAN BRUNO, CALIFORNIA 94066

PERIOD COVERED (Dates)
FROM Jan 93 TO Jan 94

PEST CONTROL OPERATION			PESTICIDE AND APPLICATION RATE		PESTICIDE PRODUCT TO BE PURCHASED OR USED					
AREA (Type of buildings or terrain to be treated)	PEST (Common Name)	TIME OR FREQUENCY (1)	COMMON NAME AND EPA NO. (2)	CONC. OR RATE (3)	FORM (4)	APPROXIMATE AMOUNT (lbs or gals)	CONC. (lb/gal or %)	PROBABLE SOURCE (Std stock no. or company name)	APPROXIMATE UNIT COST	SPECIAL PRECAUTIONS (5)
Turf	Turf Fungi	As indicated by inspection	Scotts Fungicide VIII 539-194	2-1/2 oz. per 1000 sq ft	G (II)	200 lbs	3.7%	OM Scotts & Sons		
Turf	Turf Fungi	As indicated by inspection	Scotts Fungicide VII 538-261	2-1/2 oz. per 1000 sq ft.	G (II)	200 lbs	59.%	OM Scotts & Sons		
Turf	Broad Leaf Weeds	Spring	Scotts weed grass preventer 538-186	300 lbs per acre	G (P)	100 lbs	8.5%	OM Scotts & Sons		

(Continue on reverse)

PEST CONTROL OPERATION			PESTICIDE AND APPLICATION RATE		PESTICIDE PRODUCT TO BE PURCHASED OR USED					SPECIAL PRECAUTIONS
AREA (type of buildings or areas to be treated)	PEST (Common name)	TIME OR FREQUENCY (1)	COMMON NAME AND EPA NO (2)	CONC OR RATE (3)	FORM (4)	APPROXIMATE AMOUNT (lbs or gals)	CONC (lbs/gal or %)	PROBABLE SOURCE (Stock no. or company name)	APPROXIMATE UNIT COST	(5)

NON-PESTICIDE PEST MANAGEMENT PRACTICES TO BE UNDERTAKEN (e.g., ADMINISTRATIVE PRACTICES - Promulgation of sanitation procedures to prevent fly breeding on loading docks, cancellation of agricultural outleases to prevent mosquito breeding sources. LIAISON - establishment of area cooperative weed or rodent control plans with local agencies; ENVIRONMENTAL MODIFICATION - installation of welded wire on magazine tops to prevent ground squirrel burrowing, water drainage to prevent seagulls at air fields. BIOLOGICAL CONTROL - installation of mosquito fish for mosquito control, use of bacteriological disease spores to control oak moths; CULTURAL PRACTICES - destruction of tomato crop residues to prevent fly populations, removal of ice plant to destroy mice harborages.)

NAME (Typed) AND SIGNATURE OF PEST CONTROL COORDINATOR	DATE	NAME (Typed) AND SIGNATURE OF PUBLIC WORKS OFFICER OR MAINTENANCE OFFICER	DATE	NAME (Typed) AND SIGNATURE OF ACTIVITY MEDICAL OFFICER	DATE
JAMES K. GREEN, PEST CONTROLLER	5-11-93	PAUL W. SHERWOOD, PRODUCTION DIRECTOR	5-11-93	C.A. NATHAN III, LT, MSC USN	

12ND WESTOIV 62-0/14 (REV. 1-78) (BACK)

Appendix B

Pest Management Plan and Purchase Approval Requests for Agricultural Outlease Farmers

WESTDIV 6:

INSTRUCTIONS: Prepare this form annually.
1. Specify time of year for seasonal applications. Specify frequency for year round applications.
2. Use approved pesticide name. Add name of special commercial formulation in parentheses if needed.
3. Use one of the following as appropriate: % conc., oz./gal., lbs./100 gal., oz. or lbs./1000 sq. ft., lbs./acre, etc. Outdoor applications - state whether rate is for active ingredient (ai) or product (pr), e.g. 5 # pr/AC.
4. Use following words or abbreviations: crystal (CR), dust (D), emulsifiable concentrate (EC), granule (G), pellet (P), soluble powder (SP), solution (S), wettable powder (WP), aerosol, gas, paste, strip, bait.
5. List precautions applicable to the specific situation in which the pesticide is to be applied, e.g., do not use oil base formulation, do not use for elm leaf beetles.

This form is to facilitate annual planning and approval of the activity pest co[n]trol program, and to obtain purchase approval for pesticides, pest control supplies, pesticide dispersal equipment. (References DOD DIR 4150.7, OPNAVINST 6250.3D, Marine Corps Order P11000.8A, WESTNAVFACENGCOMINST 6[illegible]

From (Activity name and address) COMMANDING OFFICER, ATTN: AJ.I (BORDIER'S NURSERY)
FMD MCAS EL TORO, P.O. BOX 94003, SANTA ANA, CA 92709-4003

To

Period covered (Dates) FROM Jan 93 to Dec 93

PEST CONTROL OPERATION			PESTICIDE AND APPLICATION RATE		PESTICIDE PRODUCT TO BE PURCHASED OR USED					
AREA (Type of buildings or terrain to be treated)	PEST (Common Name)	TIME OR FREQUENCY (1)	COMMON NAME AND EPA NO. (2)	CONC. OR RATE (3)	FORM (4)	APPROXIMATE AMOUNT (lbs or gals)	CONC. (lbs/gal or %)	PROBABLE SOURCE (Std. brand name or company name)	APPROXIMATE UNIT COST	SPECIAL PRECAUTIONS (5)
GREENHOUSE POINSETTIAS	HEIGHT CONTROL	OCT-NOV.	A-REST 1471-94-AC.	33ppm	S	5 GAL	0.026%	ELANCO		NONE
GENERAL ORNAMENTALS	FOLIAR DISEASES (BACTERIAL)	JAN-DEC.	AGRIMICIN 1007-24	8-16 oz/ACRE	WP	5 LBS	21.2%	PFIZER		NONE
GENERAL ORNAMENTALS	ANTI FOAM AGENT	JAN-DEC.	APCA 80	6 oz/ACRE	S	20 GALS	8.3 LBS/GALS	AMWAY		NONE
AZALEAS	HEIGHT CONTROL	JAN-DEC.	ATRIMEC 35377-1-2217	60 oz/ACRE	S	5 GALS	18.5%	GORDON'S		NONE
GENERAL ORNAMENTALS	PYTHIUM PHYTOPHTHERA	JAN-DEC.	ALIETTE 264-467	2½ LBS/ACRE	WP	100 LBS	80%	RHONE POULENC		NONE
GENERAL ORNAMENTALS	LEAFMINERS MITES	JAN.-DEC.	AVID 618-96	4-8 oz/ACRE	EC	10 GLS	0.15 LBS/GAL	MSD-AGVET		NONE
FLOWERING ORNAMENTALS	HEIGHT CONTROL	JAN.-DEC.	B-NINE SP 400-110	40 oz/ACRE	SP	15 LBS	85%	UNIROYAL		NONE
GENERAL ORNAMENTALS	FOLIAR DISEASES	JAN.-DEC.	BAYLETON 25 3125-318	4-8 oz/ACRE	SP	20 LBS	25%	MOBAY CO		NONE
GENERAL ORNAMENTALS	FOLIAR DISEASES	JAN.-DEC.	CAPTAN 279-3019	1-2 LBS/ACRE	WP	20 LBS	50%	FMC CO.		NONE
GENERAL ORNAMENTALS	FOLIAR DISEASES	JAN-DEC.	CHIPCO 26019 264-481	1-1½ LBS/ACRE	WP	300 LBS	50%	RHONE POULENC		NONE
GENERAL ORNAMENTALS	SCALES-WHITEFLIES	JAN-DEC.	CITRUS SPRAY OIL 11S 279-739-AA	1 GAL/ACRE	EC	20 GALS	100%	PLATTE CHEMICAL CO.		NONE
GENERAL ORNAMENTALS	FOLIAR DISEASES	JAN-DEC.	CLEARY'S 3336 1001-50	12-24 oz/ACRE	WP	200 LBS	50%	CLEARY CHEMICAL		NONE
FLOWERING ORNAMENTALS	HEIGHT CONTROL	JAN-DEC.	CYCOCEL 241-74-AA	140 oz/ACRE	S	50 GALS	11.8%	AMERICAN CYANAMID		NONE
GENERAL ORNAMENTALS	FOLIAR DISEASES	JAN.-DEC.	DACONIL 2787 50534-9	1½ LBS/ACRE	S	40 GALS	40.4%	FERMENTA CROP PROTECTION		NONE

PEST MANAGEMENT PLAN AND PURCHASE APPROVAL REQUEST
12NAVWESTDIV 6250/14 (REV. 5-78)

WESTDIV 6250

*INSTRUCTIONS: Prepare this form annually.
1. Specify time of year for seasonal applications. Specify frequency for year round applications.
2. Use approved pesticide name. Add name of special commercial formulation in parentheses if needed.
3. Use one of the following as appropriate: % conc., oz./gal., lbs./100 gal., oz. or lbs./1000 sq. ft., lbs./acre, etc. Outdoor applications - state whether rate is for active ingredient (ai) or product (pr), e.g. 5 # pr/AC.
4. Use following words or abbreviations: crystal (CR), dust (D), emulsifiable concentrate (EC), granule (G), pellet (P), soluble powder (SP), solution (S), wettable powder (WP), aerosol, gas, paste, strip, bait.
5. List precautions applicable to the specific situation in which the pesticide is to be applied, e.g., do not use oil base formulation, do not use for elm leaf beetles.

This form is to facilitate annual planning and approval of the activity pest control program, and to obtain purchase approval for pesticides, pest control supplies, and pesticide dispersal equipment. (References DOD DIR 4150.7, OPNAVINST 6240.3D, Marine Corps Order P11000.8A, WESTNAVFACENGCOMINST 6250.1)

*FROM (Activity name and address) COMMANDING OFFICER, ATTN: AJ.1 (BORDIER'S NURSERY)
FMD MCAS EL TORO, P.O. BOX 94003, SANTA ANA, CA 92709-4003

TO

PERIOD COVERED (Dates) FROM Jan 93 TO Dec 93

PEST CONTROL OPERATION			PESTICIDE AND APPLICATION RATE		PESTICIDE PRODUCT TO BE PURCHASED OR USED					SPECIAL PRECAUTIONS
AREA (Type of buildings or terrain to be treated)	PEST (Common Name)	TIME OR FREQUENCY (1)	COMMON NAME AND EPA NO. (2)	CONC. OR RATE (3)	FORM (4)	APPROXIMATE AMOUNT (lbs or gals)	CONC. (Diluted or %)	PROBABLE SOURCE (Sold direct or or commercial name)	APPROXIMATE UNIT COST	(5)
GENERAL ORNAMENTALS	MITES POWDER MILDEW	JAN-DEC.	JOUST 352-381-5481	4-8 OZ/ACRE	S	10 GALS	40%	OLYMPIC		NONE
GENERAL ORNAMENTALS	WORMS	JAN.-DEC.	JAVELIN	16 OZ/100	WP	50 LBS	1.6%	SANDOZ		NONE
GENERAL ORNAMENTALS	WORMS-APHIDS SCALES MEALYBUGS	JAN.-DEC.	KNOX OUT 2FM 4581-335	48 OZ/ACRE	FLOWABLE (Microfine suspension)	30 GALS	23%	PENNWALT CO		NONE
GENERAL ORNAMENTALS	FOLIAR DISEASES (FUNGI)	JAN.-DEC.	CHAMPION 55146-1	1 LB/ACRE	WP	50 LBS	77%	AGTROL CHEMICAL CO.		NONE
GENERAL ORNAMENTALS	APHIDS-WORMS SCALES-MEALYBUGS	JAN-DEC.	MALATHION 25W 279-739-AA	1 LB/ACRE	WP	120 LBS	25%	FMC CO.		NONE
GENERAL ORNAMENTALS	APHIDS-WHITEFLIES WORMS	JAN.-DEC.	MAVRIK A/F 55547-101	8 OZ/ACRE	A F	30 GALS	22.3%	SANDOZ CROP PROTEC.		NONE
GENERAL ORNAMENTALS	SLUGS-SNAILS	JAN.-DEC.	MESUROL 3125-288-AA	2 LBS/ACRE	WP	20 LBS	75%	MORAY CO.		SPECIAL PERMIT REQUIRED RESTRICTED MATERIAL
GENERAL ORNAMENTALS	SLUGS-SNAILS	JAN.-DEC.	METALDEHYDE METHOCARB 2-1 5481-195-12	44 LBS/ACRE	G	800 LBS	2%	AMVAC CHEMICAL CO.		SPECIAL PERMIT REQUIRED RESTRICTED MATERIAL
GENERAL ORNAMENTALS	POWDER MILDEW	JAN.-DEC.	MILBAN 58185-12	1 pt/ACRE	E.C.	12 GALS	39%	SIERRA		SPECIA PERMIT REQUIRED RESTRICTED MATERIAL
GENERAL ORNAMENTALS	ANTIFOAM AGENT	JAN.-DEC.	NO FOAM B ICS775-50008-AA	6 OZ/ACRE	S	80 GALS	25%	CREATIVE MARKETING & RESEARCH		NONE
GENERAL ORNAMENTALS	WEEDS	JAN-DEC	ORNAMENTAL HERBICIDE-2 538-172	100 LBS/ACRE	G	1000 LBS	3%	O.M. SCOTT & SONS		NONE
GENERAL ORNAMENTALS	FOLIAR DISEASES (FUNGI)	JAN.-DEC.	ORNALIN FL 58185-17	8 OZ/ACRE	WP	12 LBS	5%	SIERRA		NONE
GENERAL ORNAMENTALS	APHIDS-WORMS WHITEFLIES-THRIPS	JAN.-DEC.	ORTHENE 59639-26-AA	8 OZ/ACRE	WP	120 LBS	75%	VALENT		NONE
GENERAL ORNAMENTALS	APHIDS-WORMS WHITEFLIES-THRIPS	OCT-DEC.	ORTHENE 75 1300 499-210	16 OZ/3000 ft²	AEROSOL	100 LBS	3%	WHITMIRE CO.		NONE

PEST MANAGEMENT PLAN AND PURCHASE APPROVAL REQUEST

NAVFAC 12NO WESTDIV 6250/14 (REV. 5-78)

WESTDIV 6250

INSTRUCTIONS: Prepare this form annually.

1. Specify time of year for seasonal applications. Specify frequency for year round applications.
2. Use approved pesticide name. Add name of special commercial formulation in parentheses if needed.
3. Use one of the following as appropriate: % conc; oz/gal; lbs/100 gal; oz. or lbs/1000 sq. ft.; lbs/acre; etc. Outdoor applications - state whether rate is for active ingredient (ai) or product (pct), e.g. 5 # pt/AC.
4. Use the following words or abbreviations: crystal (CR), dust (D), emulsifiable concentrate (EC), granule (G), pellet (P), soluble powder (SP), solution (S), wettable powder (WP), aerosol, gas, paste, strip, bait.
5. List precautions applicable to the specific situation in which the pesticide is to be applied, e.g., do not use oil base formulation, do not use for elm leaf beetles.

This form is to facilitate annual planning and approval of the activity pest control program, and to obtain purchase approval for pesticides, pest control supplies, and pesticide dispersal equipment. (References DOD DIR 4150.7, OPNAVINST 6250.3D, Marine Corps Order P11000.8A, WESTNAVFACENGCOMINST 6250.1

FROM (Activity name and address) COMMANDING OFFICER, ATTN: AJ.1 (BORDIER'S NURSERY)
FMD MCAS EL TORO, P.O. BOX 94003, SANTA ANA, CA 92709-4003

TO

PERIOD COVERED (Date) FROM Jan 93 TO Dec 93

PEST CONTROL OPERATION			PESTICIDE AND APPLICATION RATE		PESTICIDE PRODUCT TO BE PURCHASED OR USED					SPECIAL PRECAUTIONS
AREA (Type of buildings or terrain to be treated)	PEST (Common Name)	TIME OR FREQUENCY (1)	COMMON NAME AND EPA NO. (2)	CONC. OR RATE (3)	FORM (4)	APPROXIMATE AMOUNT (lbs or gals)	CONC. (lbs/gal or %)	PROBABLE SOURCE (Std stock no. or company name)	APPROXIMATE UNIT COST	(5)
GENERAL ORNAMENTALS	WHITEFLIES-APHIDS LEAFMINERS SCALES THRIPS	JAN-DEC	OXAMYL 10G 904-45-AA	60LBS/ACRE	G	300LBS	10%	MILLER CHEMICAL CO.		NONE
GENERAL ORNAMENTALS	MITES	JAN.-DEC.	DENTAC A/F 55947-97	1/2 LB/ACRE	A F	15GLS	38%	SANDOZ CROP PROTECT.		NONE
GENERAL ORNAMENTALS	ADELGIOS-APHIDS MITES-WORMS	JAN.-DEC.	PAGEANT DF 62719-163	1LB/ACRE	DF	20 LBS	50%	DOW ELANCO		NONE
GENERAL ORNAMENTALS	FOLIAR DISEASES (BROAD SPECTRUM)	JAN-DEC.	PHYTON 27 49538-2	30-60 oz/ACRE	L	40GLS	21.4%	FLORALIFE INC.		NONE
GENERAL GREENHOUSE DISINFECTANT	FUNGAL, BACTERIAL ALGAL & VIRAL PLANT PATHOGENS	JULY-DEC.	PHYSAN 20 55364-5	50 oz/ACRE	L	6GLS	20%	MARIL PRODUCTS INC.		NONE
GENERAL ORNAMENTALS	POWDER MILDEW	JAN-DEC.	PIPRON 1471-58-AB	8 oz/ACRE	EC	10 QTS	82.4%	ELANCO		NONE
GREENHOUSE ORNAMENTALS	WHITEFLIES	OCT-DEC.	PLANTFUME 103 82-41-4	7 oz/20,000 ft3	SMOKE	5CLBS	15%	PLANT PRODUCTS CO.		PERMIT REQUIRED RESTRICTED MATERIAL
GENERAL ORNAMENTALS	RUST	JAN-DEC.	PLANTVAX 400-144-AA	1 LB/ACRE	WP	15 LBS	75%	UNIROYAL INC-		NONE
GENERAL ORNAMENTALS	WHITEFLIES-WORMS	JAN.-DEC.	POUNCE 3.2EC 279-3014	8 oz/ACRE	EC	46ALS	38.4%	FMC CORP.		PERMIT REQUIRED RESTRICTED MATERIAL
GENERAL ORNAMENTALS	APHIDS-WHITEFLIES WORMS	JAN.-DEC.	PYRENONE 4816-490	8 oz/ACRE	S	30GALS	6%	FAIRFIELD AMERICAN		NONE
GENERAL ORNAMENTALS	WHITEFLIES APHIDS-FUNGUS GNATS	JAN.-DEC.	RESMETHRIN TT 1200 499-180-AA	16 oz/3000 ft2	AEROSOL	180 LBS	1%	WHITMIRE CO		NONE
GENERAL ORNAMENTALS	WEEDS	JAN.-DEC.	ROUT 46574-1	100 LBS/ACRE	G	1500 LBS	2% oxy Fluorfen 1% oryzalin	SIERRA		NONE
GENERAL ORNAMENTALS	POWDERY MILDEW	JAN-DEC.	RUBIGAN 1471-155	6-8 oz/ACRE	AS	30GALS	11.6%	ELANCO		NONE
GENERAL ORNAMENTALS	APHIDS-WHITEFLIES SCALES-MITES WORMS	JAN.-DEC.	SAFERS INSECT SOAP 42697-1	1 1/2 GAL/ACRE	S	20GLS	51%	SAFER INC.		NONE

(Continued on next)

PEST MANAGEMENT PLAN AND PURCHASE APPROVAL REQUEST

NAVFAC WESTDIV 6250/14 (REV. 5-78) WESTDIV 6250

INSTRUCTIONS: 1. Prepare this form annually. 2. Specify time of year for seasonal applications. Specify frequency for year round applications. 3. Use approved pesticide name. Add name of special commercial formulation in parentheses if needed. 4. Use one of the following as appropriate: % conc., oz./gal., lbs./100 gal., oz. or lbs./1000 sq. ft., lbs./acre, etc. Outdoor applications - state whether rate is for active ingredient (ai) or product (prd, e.g. 5 = prd/AC. 5. Use following words or abbreviations: crystal (CR), dust (D), emulsifiable concentrate (EC), granule (G), pellet (P), soluble powder (SP), solution (S), wettable powder (WP), aerosol, gas, paste, strip, bait. 6. List precautions applicable to the specific situation in which the pesticide is to be applied, e.g., do not use oil base formulation, do not use for elm leaf beetles.

This form is to facilitate annual planning and approval of the activity pest control program, and to obtain purchase approval for pesticides, pest control supplies, and pesticide dispersal equipment. (References DOD DIR 4150.7, OPNAVINST 6250.3D, Marine Corps Order P11000.8A, WESTNAVFACENGCOMINST 6250.1)

Name (Activity name and address): COMMANDING OFFICER, ATTN: AJ.1 (BORDIER'S NURSERY)
FMD MCAS EL TORO, P.O. BOX 94003, SANTA ANA, CA 92709-4003

TO

PERIOD COVERED (Dates): FROM Jan 93 TO Dec 93

PEST CONTROL OPERATION			PESTICIDE AND APPLICATION RATE		PESTICIDE PRODUCT TO BE PURCHASED OR USED					SPECIAL PRECAUTIONS
AREA (Type of buildings or terrain to be treated)	PEST (Common Name)	TIME OR FREQUENCY (1)	COMMON NAME AND EPA NO. (2)	CONC. OR RATE (3)	FORM (4)	APPROXIMATE AMOUNT (lbs or gals)	CONC (lbs/gal or %)	PROBABLE SOURCE (Std stock no. or company name)	APPROXIMATE UNIT COST	(5)
GENERAL ORNAMENTALS	WEEDS	JAN.-DEC.	SOUTHERN WEED GRASS CONTROL 538-188	85 LBS/ACRE	G	600 LBS	2.68%	O.M. SCOTT & SONS		NONE
GENERAL ORNAMENTALS	SCALES-WHITEFLIES	JAN-DEC.	SPRAY OIL 415 279-739-AA	1 GAL/ACRE	EC	10 GLS	100%	PLATTE CHEMICAL CO.		NONE
GENERAL ORNAMENTALS	MITES	JAN-DEC.	STIRRUP M 53871-2	2 OZ/ACRE	LC	1 GL	2.74%	FERMONE CO.		NONE
GENERAL ORNAMENTALS	ROOT FUNGUS	JAN.-DEC	SUBDUE 2E 100-619	32 OZ/ACRE	EC	60 GALS	25.1%	CIBA-GEIGY		NONE
GENERAL ORNAMENTALS	FOLIAR FUNGUS	JAN.-DEC.	SULFUR F	16 OZ/ACRE	FLOWABLE SULFUR SUSPENSION	20 GALS	52%	CLEARY CO.		NONE
GENERAL ORNAMENTALS	WEEDS	JAN.-DEC.	SURFLAN A/S 1471-113	80 OZ/ACRE	AS	50 GALS	40.4%	ELANCO		NONE
GENERAL ORNAMENTALS	WHITE FURS APHIDS WORMS	JAN-DEC.	RESHENKIN EC 2E 904-404	16 OZ/ACRE	EC	8 GALS	26%	PRATT GABRIEL		NONE
GENERAL ORNAMENTALS	WEEDS	JAN-DEC.	RONSTAR G 264-441	100 LBS/ACRE	G	1000 LBS	2%	RHONE POULENC		NONE
OPEN FIELD	WEEDS	JAN-DEC.	ROUND UP 524-308-AA	1 1/2 GAL/ACRE	L	30 GALS	41%	MONSANTO		NONE
GENERAL ORNAMENTALS	SPREADER-STICKER	JAN-DEC.	TRITON CF 1956 707-50002-AA	6 OZ/ACRE	S	30 GLS	23%	ROHM & HAAS		NONE
GENERAL ORNAMENTALS	ROOT-FUNGI	JAN-DEC.	TURGAM 45639-59	16 OZ/ACRE	WP	12 LBS	76%	NOR-AM		NONE
GENERAL ORNAMENTALS	MITES	JUN.-SEPT	VENDEX 50W 201-369	8 OZ/ACRE	WP	40 LBS	50%	SHELL		NONE
GENERAL ORNAMENTALS	FOLIAR DISEASES	JAN-DEC.	ZYBAN 228-IL-1	1 LB/ACRE	WP	160 LBS	75%	SIERRA		NONE

(Continued on Next)

AREA (Type of building or terms to be treated)	PEST (Common name)	TIME OR FREQUENCY (1)	PESTICIDE AND APPLICATION RATE: COMMON NAME AND EPA NO. (2)	PESTICIDE AND APPLICATION RATE: CONC. OR RATE (3)	PESTICIDE PRODUCT TO BE PURCHASED OR USED: FORM (4)	PESTICIDE PRODUCT TO BE PURCHASED OR USED: APPROXIMATE AMOUNT (lbs or gals)	PESTICIDE PRODUCT TO BE PURCHASED OR USED: CONC. (lbs/gal or %)	PESTICIDE PRODUCT TO BE PURCHASED OR USED: PROBABLE SOURCE (Std stock no. or company name)	PESTICIDE PRODUCT TO BE PURCHASED OR USED: APPROXIMATE UNIT COST	SPECIAL PRECAUTIONS (5)
GENERAL ORNAMENTALS	SLUGS-SNAILS	JAN.-DEC.	DEADLINE BULLETS 8E01-34	50 LBS/ACRE	BAIT	500 LBS	4%	PACE NATIONAL CO		NONE
GENERAL ORNAMENTALS	WEEDS	JAN-DEC.	DEVRINOL	8-12 LBS/ACRE	WP	150 LBS	50%	ICI		NONE
GENERAL ORNAMENTALS	APHIDS-WORMS SCALES-MEALYBUGS	JAN.-DEC.	DIAZINON SOW 655-456	1 LB/ACRE	WP	100 LBS	50%	PRENTOX		NONE
GENERAL ORNAMENTALS	ANTS CRICKETS EARWIGS-SOWBUGS	JAN-DEC.	DIAZINON 5G 10370-44	2 LBS/1000 FT²	G	150 LBS	5%	FORD'S CHEMICAL & SERVICE INC.		NONE
NON CROP AREAS (ROAD-DICHES-EMPTY SPACES	WEEDS	JAN-DEC	DIQUAT 239-1663-AA	32 OZ/ACRE	AS	50 GALS	35.3%	ORTHO		NONE
GENERAL ORNAMENTALS	WHITE FLIES-APHIDS SCALES-HEMIPTERA	JAN.-DEC.	ENKTAR 5E 55947-82	6-20 OZ/ACRE	EC	200 GALS	65.3%	SANDOZ CROP PROTECTION		NONE
GREENHOUSES	FOLIAR DISEASES	SEPT-DEC	EXOTHERM TERMIC 70-223	3.5 OZ/1000 FT²	SMOKE	1200 LBS	20%	RIGO CHEM. CO		NONE
GENERAL ORNAMENTALS	FOLIAR DISEASES	JAN.-DEC	FORE 707-87	24 OZ/ACRE	WP	80 LBS	80%	ROHM & HAAS		NONE
GENERAL ORNAMENTALS	FOLIAR DISEASES	JAN-DEC.	FUNGO FL 45SI-352-5818S	20 OZ/ACRE	LF	50 GLS	46.2%	GRACE SIERRA		NONE
GREENHOUSES	DISINFECTANT & ALGICIDE	5 applications	GREENSHIELD TT2000 5336-PS-499	50 OZ/100 GAL	S	10 GALS	20%	WHITMIRE		NONE
GENERAL ORNAMENTALS	FUNGUS GNATS	NOV-JAN	GNATROL 275-52	64 OZ/ACRE	AS	8 GALS	6001U/MG	ABBOTT LABORATORIES		NONE

NON-PESTICIDE PEST MANAGEMENT PRACTICES TO BE UNDERTAKEN (6). ADMINISTRATIVE PRACTICES - Promulgation of sanitation procedures to prevent fly breeding on loading docks, cancellation of agricultural outleases to prevent mosquito breeding sources. LIAISON - establishment of area cooperative weed or rodent control plans with local agencies. ENVIRONMENTAL MODIFICATION - installation of welded wire on magazine tops to prevent ground squirrel burrowing, water drainage to prevent mosquito or rat fields. BIOLOGICAL CONTROL - installation of mosquito fish for mosquito control, use of bacteriological disease spores to control oak moths. CULTURAL PRACTICES - destruction of tomato crop residues to prevent fly populations, removal of ice plant to destroy mice harborages.

NAME (Typed) AND SIGNATURE OF PEST CONTROL COORDINATOR	DATE	NAME (Typed) AND SIGNATURE OF PUBLIC WORKS OR MAINTENANCE OFFICER	DATE	NAME (Typed) AND SIGNATURE OF ACTIVITY MEDICAL OFFICER	DATE

12ND WESTDIV 6250/14 (REV. 1-76) (BACK)

PEST CONTROL OPERATION			PESTICIDE AND APPLICATION RATE		PESTICIDE PRODUCT TO BE PURCHASED OR USED					SPECIAL PRECAUTIONS
AREA (Type of building or area to be treated)	PEST (Common name)	TIME OR FREQUENCY (1)	COMMON NAME AND EPA NO (2)	CONC OR RATE (3)	FORM (4)	APPROXIMATE AMOUNT (Dry or gals)	CONC (lbs/gal or %)	PROBABLE SOURCE (Stock room or company name)	APPROXIMATE UNIT COST	(5)

NON-PESTICIDE PEST MANAGEMENT PRACTICES TO BE UNDERTAKEN (e.g., ADMINISTRATIVE PRACTICES - Promulgation of sanitation procedures to prevent fly breeding on loading docks, cancellation of agricultural outleases to prevent mosquito breeding sources; LIAISON - establishment of area cooperative weed or rodent control plans with local agencies; ENVIRONMENTAL MODIFICATION - installation of welded wire on magazine tops to prevent ground squirrel burrowing, water drainage to prevent seagulls at air fields; BIOLOGICAL CONTROL - installation of mosquito fish for mosquito control, use of bacteriological disease spores to control oak moths; CULTURAL PRACTICES - destruction of tomato crop residues to prevent fly populations, removal of ice plant to destroy mice harborages.)

NAME (Typed) AND SIGNATURE OF PEST CONTROL COORDINATOR	DATE	NAME (Typed) AND SIGNATURE OF MAINTENANCE OFFICER	DATE	NAME (Typed) AND SIGNATURE OF PREVENTIVE MEDICAL OFFICER	DATE
JAMES J. GREEN, PEST CONTROLLER	5-11-93	PAUL W. SHERWOOD, PRODUCTION DIRECTOR	5-11-93	C.A. LAHIAN III, LT, MSC USN	

12ND WESTDIV 6250/14 (REV. 1-78) – (BACK)

12NO WESTDIV 6250/14 (REV. 5-78) — WESTDIV 625

INSTRUCTIONS: Prepare this form annually.
1. Specify time of year for seasonal applications. Specify frequency for year round applications.
2. Use approved pesticide name. Add name of special commercial formulation in parentheses if needed.
3. Use one of the following as appropriate: % conc., oz./gal., lbs./100 gal., oz. or lbs./1000 sq. ft., lbs./acre, etc. Outdoor applications - state whether rate is for active ingredient (ai) or product (pr), e.g. 5 # pr/AC.
4. Use following words or abbreviations: crystal (CR), dust (D), emulsifiable concentrate (EC), granule (G), pellet (P), soluble powder (SP), solution (S), wettable powder (WP), aerosol, gas, paste, strip, bait.
5. List precautions applicable to the specific situation in which the pesticide is to be applied, e.g., do not use oil base formulation, do not use for elm leaf beetles.

This form is to facilitate annual planning and approval of the activity pest control program, and to obtain purchase approval for pesticides, pest control supplies, pesticide dispersal equipment. (References DOD DIR 4150.7, OPNAVINST 6240.3D, Marine Corps Order P11000.8A, WESTNAVFACENGCOMINST 6240

FROM (Activity name and address): U. S. Marine Corps Air Station, El Toro (Santa Ana), CA 92709 — THE IRVINE COMPANY

TO: WESTERN DIVISION (10A)
NAVAL FACILITIES ENGINEERING COMMAND
P.O. BOX 727, SAN BRUNO, CALIFORNIA 94066

PERIOD COVERED (Dates): FROM NOV 92 TO DEC 93

PEST CONTROL OPERATION			PESTICIDE AND APPLICATION RATE		PESTICIDE PRODUCT TO BE PURCHASED OR USED					SPECIAL PRECAUTIONS
AREA (Type of buildings or terrain to be treated)	PEST (Common Name)	TIME OR FREQUENCY (1)	COMMON NAME AND EPA NO. (2)	CONC. OR RATE (3)	FORM (4)	APPROXIMATE AMOUNT (lbs or gals)	CONC. (lbs/gal or %)	PROBABLE SOURCE (Std stock no. or company name)	APPROXIMATE UNIT COST	(5)
Valencia, Oranges	Squirrel	March-May July, Sept-Oct	Diphacinone #770247	3 lbs	G	150 lb	.005%	County Agriculture Commissioner - Orange County	—	none ↓
	Gopher	"	"	"	"	25 lbs	.005%	Same as above	—	
	Weeds	Nov, Dec	Kroval #352505	4 lb	WP	20 81bs	80%	Dupont	—	
			Surflan #1471-112	1 Gal	S	52 Gal	4 lbs	DOW-Elanco	—	
		Feb, April June, Aug.	Roundup #524-308-AA	2502	S	4 Gal	4 lbs	monsanto	—	
	Thrips *	June	Sabadilla #39834-1	10 lbs	S	520 lbs	.2%	Dunhil	—	
	Snails *	Dec, April Oct.	Deadline Bullets #8501-34	15 lbs	G	390 lb	4%	Pace National Corperation	—	
	Black Scale	July-Aug.	440 oil #239-1736-34704	3QT	L	75 gal	98%	Clean Crop	—	

* Application is not historically practiced, but is always a possibility depending on enviornmental conditions of each growing season.

(Continued on next)

PEST CONTROL OPERATION			PESTICIDE AND APPLICATION RATE		PESTICIDE PRODUCT TO BE PURCHASED OR USED					SPECIAL PRECAUTIONS
AREA (Type of buildings or items to be treated)	PEST (Common name)	TIME OR FREQUENCY (1)	COMMON NAME AND EPA NO (2)	CONC OR RATE (3)	FORM (4)	APPROXIMATE AMOUNT (Dry or gals)	CONC (Ready-to-use %)	PROBABLE SOURCE (Std stock no. or company name)	APPROXIMATE UNIT COST	(5)

NON-PESTICIDE PEST MANAGEMENT PRACTICES TO BE UNDERTAKEN (e.g., ADMINISTRATIVE PRACTICES - Promulgation of sanitation procedures to prevent fly breeding on loading docks, cancellation of agricultural outleases to prevent mosquito breeding sources, LIAISON - establishment of area cooperative weed or rodent control plans with local agencies; ENVIRONMENTAL MODIFICATION - installation of welded wire on magazine tops to prevent ground squirrel burrowing, water drainage to prevent seagulls at air fields, BIOLOGICAL CONTROL - installation of mosquito fish for mosquito control, use of bacteriological disease spores to control oak moths; CULTURAL PRACTICES - destruction of tomato crop residues to prevent fly populations, removal of ice plant to destroy mice harborages.)

NAME (Typed) AND SIGNATURE OF PEST CONTROL COORDINATOR	DATE	NAME (Typed) AND SIGNATURE OF [illegible] OFFICER	DATE	NAME (Typed) AND SIGNATURE OF ACTIVITY MEDICAL OFFICER	DATE
JAMES J. GREEN, PEST CONTROLLER	5-11-93	PAUL W. SHERWOOD, PRODUCTION DIRECTOR	5-11-93	C. A. LATHAM M.D. CDR MSC USN	

PEST MANAGEMENT PLAN AND PURCHASE APPROVAL REQUEST
12ND WESTDIV 6250/14 (REV. 5-78)

WESTDIV 6250

INSTRUCTIONS. Prepare this form annually.
1. Specify time of year for seasonal applications. Specify frequency for year round applications.
2. Use approved pesticide name. Add name of special commercial formulation in parentheses if needed.
3. Use one of the following as appropriate: % conc., oz./gal., lbs./100 gal., oz. or lbs./1000 sq. ft., lbs./acre, etc. Outdoor applications - state whether rate is for active ingredient (ai) or product (pr), e.g. 5 # pr/AC
4. Use following words or abbreviations: crystal (CR), dust (D), emulsifiable concentrate (EC), granule (G), pellet (P), soluble powder (SP), solution (S), wettable powder (WP), aerosol, gas, paste, strip, bait
5. List precautions applicable to the specific situation in which the pesticide is to be applied, e.g., do not use oil base formulation, do not use for clinical beetles

This form is to facilitate annual planning and approval of the activity pest control program, and to obtain purchase approval for pesticides, pest control supplies, and pesticide dispersal equipment. (References DOD DIR 4150.7, OPNAVINST 6250.4D, Marine Corps Order P11000.8A, WESTNAVFACENGCOMINST 6250)

FROM (Activity name and address) COMMANDING OFFICER, ATTN: AJ.1 (ELITE DISTRIBUTING)
FMD MCAS EL TORO, P.O. BOX 94003, SANTA ANA, CA 92709-4003

TO Strawberries
Gale3

PERIOD COVERED (Dates) FROM Jan 93 TO Dec 93

PEST CONTROL OPERATION			PESTICIDE AND APPLICATION RATE		PESTICIDE PRODUCT TO BE PURCHASED OR USED					SPECIAL PRECAUTIONS (5)
AREA (Type of buildings or terrain to be treated)	PEST (Common Name)	TIME OR FREQUENCY (1)	COMMON NAME AND EPA NO. (2)	CONC OR RATE (3)	FORM (4)	APPROXIMATE AMOUNT (lbs or gals)	CONC (lbs/gal or %)	PROBABLE SOURCE (Std stock no. or company name)	APPROXIMATE UNIT COST	
	WEEDS	SEPT	VAPAM 10182-CA-2	100 GAL/AC	S	5500 GAL	32.7	I.C.I.		
	FUNGI	NOV.-JULY	CAPTAN 10182-149	6LB.	WP	2000 LBS	.50%	I.C.I.		
	WEEDS	SEPT.-NOV	DEVRINOL 10182-258	8 LB.	WP	440 LBS	.50%	I.C.I.		
	FUNGI	NOV.-JULY	THIRAM 45728-24-11656	2½LB.	WP	800 LBS	.65%	WESTERN FARM SERVICE		
	INSECT	SEPT.-NOV.	MORESTAN 3125-302	1 LB.	WP	100LBS.	25%	MILES		
	FUNGI	SEPT.-JULY	BENLATE 352-354	1 LB.	WP	330 LBS	.50%	DUPONT		
	INSECT	SEPT.-JULY	OMITE 400-82	5 LB.	WP	800 LBS	.30%	UNIROYAL		
	FUNGI	JAN.-JUNE	ROVRAL 264-453	2 LB	WP	440 LBS	.50%	RHENE-POULENC		
	INSECT	JAN.-JULY	VENDEX 352-480	3 LB.	WP	1000 LBS	.50%	DUPONT		
	FUNGI	NOV-JULY	FLOW. SULFUR	2 PINTS	S	350GAL	52%	CLEANCROP		
	INSECT	NOV.-JUNE	AVID 618-96	1 PINT	EC	27GAL	1.9%	MERCH		
	INSECT	SEPT-JULY	ACTIVATOR 90	1 PINT	S	55GAL	90%	LOVELAND INDUSTRIES		
	GROUND SQUIRREL	JAN-DEC	REMIK GREEN	10 LBS	P	600 LBS	0.005%	HACO INC		
	INSECT	OCT-JULY	HINERIC	4 OZ.	S	8GAL	99%	HELENA CHEMICAL		
	INSECT	OCT-JULY	DIUZIVERCAN 100-460-347	1.33 LBS	WP	330LBS	50%	CLEANCROP		
	INSECT	OCT-JULY	PYRELLIN 30573-2	2 PINTS	EC	50 GAL	1.6%	WEBB WRIGHT		
	INSECT	JAN-MARCH	MALATHION 34704-291	2½LBS.	WP	400 LBS	25%	CLEANCROP		
	INSECT	SEPT-JUNE	LANNATE 352-342	1 LB	SP	200LBS	90%	DUPONT		
	INSECT	FEB-JUNE	DIBROM 50639-8025	10 OZ.	EC	8 GAL	58%	UCELENT		
	BACTERIA	OCT-JUNE	CHAMP 55146-41	2 PINTS	S	40 GAL	23%	AGTROL CHEMICAL		
	INSECT	OCT-JULY	JAVLIN 55947-136	1½LBS.	WP	430LBS.	6.4%	SANDOZ		

(Continue on reverse)

...GEMENT PLAN ... ...CHASE APPROVAL REQUEST
...IV 6250/14 (REV. 5-78)

WESTDIV 6250 7

IONS: Prepare this form annually.
- time of year for seasonal applications. Specify frequency for year round applications.
- proved pesticide name. Add name of special commercial formulation in parentheses if needed.
- e of the following as appropriate: % conc., oz./gal., lbs./100 gal., oz. or lbs./1000 sq. ft., lbs./acre, etc. Outdoor applications - state whether rate is for active ingredient (ai) or product (pr), e.g. 5 # pr/AC
- llowing words or abbreviations: crystal (CR), dust (D), emulsifiable concentrate (EC), granule (G), pellet (P), soluble powder (SP), solution (S), ...ettable powder (WP), aerosol, gas, paste, strip, bait.
- ecautions applicable to the specific situation in which the pesticide is to be applied, e.g., do not use oil base formulation, do not use for elm leaf beetles.

This form is to facilitate annual planning and approval of the activity pest control program, and to obtain purchase approval for pesticides, pest control supplies, and pesticide dispersal equipment. (References DOD DIR 4150.7, OPNAVINST 6250.3D, Marine Corps Order P11000.8A, WESTNAVFACENGCOMINST 6250.1)

(name and address)
COMMANDING OFFICER ATTN: AQ-1 (ELITE DISTRIBUTING COMPANY)
FMO MCAS EL TORO, P.O. BOX 94003 SANTA ANA,CA 92709-4003

PERIOD COVERED (Dates)
FROM JAN 93 TO DEC31 93

PEST CONTROL OPERATION			PESTICIDE AND APPLICATION RATE		PESTICIDE PRODUCT TO BE PURCHASED OR USED					SPECIAL PRECAUTIONS
AREA (s of buildings or ...to be treated)	PEST (Common Name)	TIME OR FREQUENCY (1)	COMMON NAME AND EPA NO. (2)	CONC. OR RATE (3)	FORM (4)	APPROXIMATE AMOUNT (lbs or gals)	CONC. (lbs/gal or %)	PROBABLE SOURCE (Std stock no. or company name)	APPROXIMATE UNIT COST	(5)
	INSECT	MAY-JULY	GUTHION 3125-301	1 LB	SP	200LB	52%	MILES		
	INSECT	APRIL-JULY	PHOSDRIN 5481-114	1 PINT	EC	13 GAL	50%	AMVAC		
	INSECT	OCT-JULY	M-PECLE 53219-6	4 QTS.	S	50 GAL	100%	MYCOGEN		
	FUNGI	NOV-JULY	RALLY 707-215	4 OZ	WP	50 LBS.	40%	RHEM& HAAS		
	INSECT	OCT-JUNE	SEVINBAIT 34704-373	40LBS	P	8000LBS.	5%	WESTIN FARM SERVICE		
	WEED	MAY	DACTHAL 50534-1	10 LBS	WP	150 LBS.	50%	ISK BIOTECH		
	INSECT	JULY	ORTHENE 755 59639-26-AD	1.33 LB	S	20 LBS	80%	VALLENT		
	WEED	SEPT-OCT	GRAMORONE EXTRA 10182-280	3 PINTS	EC	40 GAL	37%	I.C.I.		
	WEED	JAN-DEC	ROUNDUP 524-445	2 QTS.	EC	30 GAL	41%	MONSANTO		
	FUNGI	JUNE-JULY	BRAVO500 50534-8	2 PINTS	S	10 GAL	40.4%	ISK BIOTECH		

PEST CONTROL OPERATION			PESTICIDE AND APPLICATION RATE		PESTICIDE PRODUCT TO BE PURCHASED OR USED					SPECIAL PRECAUTIONS (7)
AREA (Type of buildings or terrain to be treated)	PEST (Common name)	TIME OR FREQUENCY (1)	COMMON NAME AND EPA NO (2)	CONC OR RATE (3)	FORM (4)	APPROXIMATE AMOUNT (Liter or gals)	CONC (lb/gal or %)	PROBABLE SOURCE (Std stock no. or company name)	APPROXIMATE UNIT COST	

NON-PESTICIDE PEST MANAGEMENT PRACTICES TO BE UNDERTAKEN (e.g., ADMINISTRATIVE PRACTICES - Promulgation of sanitation procedures to prevent fly breeding on loading docks, cancellation of agricultural outleases to prevent mosquito breeding sources; LIAISON - establishment of area cooperative weed or rodent control plans with local agencies; ENVIRONMENTAL MODIFICATION - installation of welded wire on magazine tops to prevent ground squirrel burrowing, water drainage to prevent seagulls at air fields; BIOLOGICAL CONTROL - installation of mosquito fish for mosquito control, use of bacteriological disease spores to control oak moths; CULTURAL PRACTICES - destruction of tomato crop residues to prevent fly populations, removal of ice plant to destroy mice harborages.)

NAME (typed) AND SIGNATURE OF PEST CONTROL COORDINATOR	DATE	NAME (typed) AND SIGNATURE OF QUALITY ASSURANCE OFFICER	DATE	NAME (typed) AND SIGNATURE OF ACTIVITY MEDICAL OFFICER	DATE
JAMES J. GREEN, PEST CONTROLLER	5-11-93	PAUL W. SHERWOOD, PRODUCTION DIRECTOR	5-11-93	C. A. LATHAM, LT, MSC USN	

PEST MANAGEMENT ND PURCHASE APPROVAL REQUEST
12ND WESTDIV 6250/14 (1) WESTDIV 6250/2

INSTRUCTIONS. Prepare this form annually.

1. Specify time of year for seasonal applications. Specify frequency for year round applications
2. Use approved pesticide name. Add name of special commercial formulation in parentheses if needed
3. Use one of the following as appropriate: % conc., oz/gal., lbs/100 gal., oz. or lbs/1000 sq. ft., lbs/acre, etc. Outdoor applications state whether rate is for active ingredient (active product (spot e.g., 5 oz pt. AI
4. Use following words or abbreviations: crystal (CR), dust (D), emulsifiable concentrate (EC), granule (G), pellet (P), soluble powder (SP), solution (S), wettable powder (WP), aerosol, gas, paste, strip, bait
5. List precautions applicable to the specific situation in which the pesticide is to be applied e.g., do not use oil base formulation, do not use for elm leaf beetles

*This form is to facilitate annual planning and approval of the activity pest control program, and local area purchase approval for pesticides, pest control supplies, and pesticide dispersal equipment. (References DOD DIR 4150.7, OPNAVINST 6250.3D, Marine Corps Order P11000.XX, WESTNAVFACENGCOMINST 6250.1 (

FROM (Activity name and address) U. S. Marine Corps Air Station
El Toro (Santa Ana), CA 92709 MAGARRO FARMS

TO WESTERN DIVISION (10A)
NAVAL FACILITIES ENGINEERING COMMAND
P.O. BOX 727, SAN BRUNO, CALIFORNIA 94066

PERIOD COVERED (Dates) FROM 1 Aug 91 TO 31 July 92

PEST CONTROL OPERATION			PESTICIDE AND APPLICATION RATE		PESTICIDE PRODUCT TO BE PURCHASED OR USED					SPECIAL PRECAUTIONS
AREA (Type of building or terrain to be treated)	PEST (Common Name)	TIME OR FREQUENCY (1)	COMMON NAME AND EPA NO (2)	CONC OR RATE (3)	FORM (4)	APPROXIMATE AMOUNT (lbs or gals)	CONC (lbs/gal or %)	PROBABLE SOURCE (Std Brand Name or Company name)	APPROXIMATE UNIT COST	(5)
Strawberry	Mite	Dec to May 2 times	Omite 400-82	5#	WP	750#	30 W	Uniroyal		
Strawberry	Mite	Dec to May 2 times	Avid 618-96	16 oz.	EC	18 Gal.	0.15	Merck & Co.		
Strawberry	Mite	Dec to May 2 times	Vendex 352-480	2#	WP	480#	50 WP	DuPont		
Strawberry	Botrytis	Dec to May 2 times	Benlate 352-447	1#	DF	300#	50 DF	DuPont		
Strawberry	Botrytis	Dec to May 2 times	Roval 264-453	1½#	WP	420#	50	Rhone Poulenc		
Strawberry	Botrytis	Dec to May 1 time	Captan 34704-427	4#	WP	600#	50	Clean Crop		
Strawberry	Botrytis	Dec to May 1 time	Thiram 11656-68AA	2½#	WP	400#	65	Western Farm Serv.		
Strawberry	Botrytis	Dec to May 1 time	Dyrene 3125-50	4#	WP	600#	50	Mobay		
Strawberry	Mildew	Dec to May 1 time	Super Six 1812-196	1 qt.	S	50 Gal.	52%	Griffin		
Strawberry	Worms	Dec to May 2 times	Lannate 352-342	1#	SP	350#	90%	DuPont		
Strawberry	Worms-Aphid	Dec to May 1 time	Thiodan 279-1290-34704	2#	WP	350#	50%	Clean Crop		
Strawberry	Worms	Dec to May 2 times	Javelin W G 55947-136	1¼#	WG	450#	BT	Sandoz		
Strawberry	Worms-Aphid	Dec to May 1 time	Pyrellin 30573-2	1 qt.	EC	40 Gal.	1.60%	Webb-Wright		
Cabbage	Worms	Oct to May 2 times	Lannate 352-342	1#	SP	300#	90%	DuPont		
Cabbage	Worms	Oct to May 2 times	Javelin 55947-136	1¼#	WG	350#	BT	Sandoz		
Cabbage	Aphids	Oct to May 2 times	Meta-Systox R	2 pt.	EC	60 Gal.	25%	Mobay		

[illegible] AND PURCHASE APPROVAL REQUEST

[illegible] pare this form annually.

[illegible] year for seasonal applications. Specify frequency for year round applications.

[illegible] approved pesticide name. Add name of special commercial formulation in parentheses if needed.

[illegible] one of the following as appropriate: % conc., oz./gal., lbs./100 gal., oz. or lbs./1000 sq. ft., lbs./acre, etc. Outdoor applications - state whether rate is for active ingredient (a.i.) or product [illegible]

[illegible] the following words or abbreviations: crystal (CR), dust (D), emulsifiable concentrate (EC), granule (G), pellet (P), soluble powder (SP), solution (S), wettable powder (WP), aerosol, gas, paste, strip, bait

[illegible] precautions applicable to the specific situation in which the pesticide is to be applied, e.g., do not use oil base formulation; do not use [illegible]

This form is to facilitate annual planning and approval of the activity's [illegible] program and to obtain purchase approval for pesticides, pest control [illegible] pesticide disposal equipment. (References DOD DIR 4150.7, OPNAVINST [illegible] Marine Corps Order P11000 [illegible] WESTNAVFACENGCOMINST [illegible]

FROM (Activity name and address): U. S. Marine Corps Air Station El Toro (Santa Ana), CA 92709 MACARRO FARMS

TO: WESTERN DIVISION (Code [illegible]) NAVAL FACILITIES ENGINEERING COMMAND P.O. BOX 727, SAN BRUNO, CALIFORNIA 94066

PERIOD COVERED (Date): FROM 1 Aug 91 TO 31 Jul 92

PEST CONTROL OPERATION			PESTICIDE AND APPLICATION RATE		PESTICIDE PRODUCT TO BE PURCHASED OR USED					SPECIAL PRECAUTIONS
AREA (Type of buildings or terrain to be treated)	PEST (Common Name)	TIME OR FREQUENCY (1)	COMMON NAME AND EPA NO. (2)	CONC OR RATE (3)	FORM (4)	APPROXIMATE AMOUNT	CONC	PROBABLE SOURCE	APPROXIMATE UNIT COST	(5)
Green Beans	Worms	Mar to Oct 1 Time	Lannate 352-342	1#	SP	120#	90%	DuPont		
Green Beans	Worms-Aphid	Mar to Oct 1 Time	Orthene 239-2418-59639	1 1/3#	SP	180#	75 S	Valent		
Green Beans	Worms	Mar to Oct 1 Time	Javelin 55947-136	1¼#	WG	130#	BT	Sandoz		
Squash	Worms	Apr to Sept 1 Time	Lannate 352-342	1#	SP	90#	90%	DuPont		
Squash	Worms	Apr to Sept 1 Time	Javelin 55947-126	1¼#	WG	100#	BT	Sandoz		
Squash	Aphids	Apr to Sept 1 Time	Meta-Systox R 3125-111	2 pt.	EC	15 Gal.	25%	Mobay		
Squash	Mildew	June to Sept 1 Time	Thiolux 55947-48-34704	5#	WP	300#	80%	Clean Crop		
Lettuce	Worms	Oct to Mar 1 Time	Lannate 352-342	1#	SP	95#	90%	DuPont		
Lettuce	Worms	Oct to Mar 1 Time	Javelin 55947-126	1¼#	WG	110#	BT	Sandoz		
Lettuce	Aphid	Oct to Mar 1 Time	Dimethoate 2749-41-34704	3/4 pt.	EC	10 Gal.	2.67%	Clean Crop		
Peppers	Worms	June/Sept 2 Times	Lannate 352-342	1#	SP	160#	90%	DuPont		
Peppers	Worms	June/Sept 1 Time	Javelin 55947-136	1¼#	WG	90#	BT	Sandoz		
Peppers	Aphid	June/Sept 2 Times	Meta-Systox R 3125-111	2 pt.	EC	80 Gal.	25%	Mobay		
Peppers	Aphid-Worms	June/Sept 1 Time	Orthene 239-2418-59629	1 1/3#	SP	92#	75 S	Valent		

[illegible] CONTROL OPERATION			PESTICIDE AND APPLICATION RATE		PESTICIDE PRODUCT TO BE PURCHASED OR USED					
AREA (type of buildings or terrain to be treated)	PEST (Common name)	TIME OR FREQUENCY (1)	COMMON NAME AND EPA NO (2)	CONC. OR RATE (3)	[illegible] (4)	APPROXIMATE AMOUNT [illegible]	[illegible]	PROBABLE SOURCE [illegible]	[illegible]	[illegible] CAUTIONS

NON-PESTICIDE PEST MANAGEMENT PRACTICES TO BE UNDERTAKEN (e.g., ADMINISTRATIVE PRACTICES - Promulgation of sanitation procedures to prevent fly breeding on loading docks, cancellation of agricultural outleases to prevent mosquito breeding sources. LIAISON - establishment of area cooperative weed or rodent control plans with local agencies. ENVIRONMENTAL MODIFICATION - installation of welded wire on magazine tops to prevent ground squirrel burrowing, water drainage to prevent seagulls at air fields. BIOLOGICAL CONTROL - installation of mosquito fish for mosquito control, use of bacteriological disease spores to control oak moths. CULTURAL PRACTICES - destruction of tomato crop residues to prevent fly populations, removal of ice plant to destroy mice harborages.)

NAME (typed) AND SIGNATURE OF PEST CONTROL COORDINATOR	DATE	NAME (typed) AND SIGNATURE OF [illegible] OFFICER	DATE	NAME (typed) AND SIGNATURE OF ACTIVITY MEDICAL OFFICER	DATE
JAMES J. GREEN, PEST CONTROLLER	5-11-93	PAUL W. SHERWOOD, PRODUCTION DIRECTOR	5-11-93	C. A. LATHAN III, LT, MSC USN	

12ND WESTDIV 6250/14 (REV. 1-78) (BACK)

Appendix C

Environmental Compliance and Protection Manual
Marine Corps Order P5090.2
Chapter 15 - Pesticide Pollution Prevention

MCO P5090.2

ENVIRONMENTAL COMPLIANCE AND PROTECTION MANUAL

U.S. MARINE CORPS

PCN 102 071871 00

DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
WASHINGTON, D.C. 20380-0001

MCO P5090.2
LFL
26 Sep 91

MARINE CORPS ORDER P5090.2

From: Commandant of the Marine Corps
To: Distribution List

Subj: ENVIRONMENTAL COMPLIANCE AND PROTECTION MANUAL

Encl: (1) LOCATOR SHEET

Reports Required: List, page v

1. Purpose. American society has shown a determined concern for the protection and enhancement of the environment. As a result, the Secretary of Defense has made the commitment that DoD will take the lead in Federal agency environmental compliance and protection. Military leaders are expected to conform to a new national ethic and to consider a new set of priorities which have been superimposed on our traditional defense mission. Consistent with this objective, this Manual has been revised to provide guidance and instruction to installations enabling them to meet stringent environmental legislation and increasing pressure by regulatory agencies at the Federal, State, and local level.

2. Cancellation. MCO P11000.8B

3. Summary of Revision. This is a new Manual and should be reviewed in its entirety.

4. Recommendations. Recommendations concerning the contents of this Manual are invited. Such recommendations will be forwarded to the Commandant of the Marine Corps (LFL) via the appropriate chain of command.

5. Reserve Applicability. This Manual is applicable to the Marine Corps Reserve.

6. Certification. Reviewed and approved this date.

R. J. WINGLASS
Deputy Chief of Staff
for Installations and Logistics

DISTRIBUTION: PCN 10207187100

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CHAPTER 15

PESTICIDE POLLUTION PREVENTION

CHAPTER 15

PESTICIDE POLLUTION PREVENTION

SECTION 1: INTRODUCTION

15100. INTRODUCTION

1. This chapter provides requirements and policy relative to the prevention of pollution from the mixing, storage, and disposal of pesticides at Marine Corps installations. The requirements apply within the United States, possessions, and trust territories. Marine Corps policy with respect to installations in foreign countries is provided in appendix C.

2. More detailed requirements and responsibilities relative to the application and control of pesticides at Marine Corps installations are in OPNAV Instruction 6250.4, signed jointly by direction of the Commandant of the Marine Corps and the Chief of Naval Operations. Marine Corps operations involving discharge of any wastewater from pesticide formulation, mixing, or equipment cleanup area is prohibited unless permitted under the NPDES. This includes onsite wastewater treatment works that discharge to a public sewer or into navigable waters and untreated discharges to a public sewer. Prevention of pollutants in wastewater, including pesticides, is further discussed in chapter 7. Waste pesticides that are also hazardous wastes must comply with the requirements of RCRA, which specifies waste management standards. Management of HW, including waste pesticides, is further discussed in chapter 9. Environmental compliance for pesticides must also be integrated with occupational health and safety policies and regulations.

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CHAPTER 15

PESTICIDE POLLUTION PREVENTION

SECTION 2: FEDERAL STATUTES

15200. FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT. FIFRA provides the principal means for preventing environmental pollution from pesticides through product registration and applicator certification. The registration of all pesticide products by EPA results in label instructions on each container for use, storage, and disposal. Label instructions are legally applicable to all users. Under FIFRA, EPA is required to accept certain pesticides under recall for safe disposal. It is unlawful to purchase, distribute, or use any pesticide that does not have an EPA registration number or for which registration has been canceled or suspended, or to apply, store, or dispose of any pesticide or container in any manner inconsistent with applicable regulations.

15201. RESOURCE CONSERVATION AND RECOVERY ACT

1. The disposal of excess or waste pesticides and equipment and containers contaminated by pesticides is integrated within the HW management requirements of RCRA. EPA identifies the criteria, standards, and requirements by which excess pesticides, pesticide containers, and the waste resulting from the cleanup of pesticide spills are considered.

2. RCRA has been amended several times, including the Hazardous and Solid Waste Amendments of 1984. Under section 3004(d) of HSWA, EPA promulgated the Land Disposal Restrictions regulations under 40 CFR 268. Hazardous wastes were prohibited from land disposal unless they met the treatment standards established by EPA that substantially reduce the toxicity or likelihood of migration of the waste. Waste pesticides that may also be hazardous include the following:

a. **D Wastes.** Characteristic, wastes such as ignitable, corrosive, reactive, or TCLP wastes.

b. **P Wastes.** Listed acutely hazardous commercial chemical products (including formulations in which the chemical is the sole active ingredient), manufacturing intermediates, off-specification products, container residues, and spill residues.

c. **U Wastes.** Listed toxic commercial chemical products, manufacturing intermediates, off-specification products, container residues, and spill residues.

3. EPA has developed a schedule for prohibiting land disposal of these wastes.

15202. CLEAN WATER ACT. The CWA provides for protection of surface waters from contamination by pesticides in wastewater and in land runoff. Control is exercised through stringent effluent limitations imposed through the NPDES permitting program (chapter 7).

15203. EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT. EPCRKA provides for protection and notification of communities in the event of a release of a toxic chemical. The list of toxic chemicals requiring notification includes several pesticides. The Marine Corps voluntarily complies with specific provisions of EPCKRA that call for

emergency planning and release notification (chapter 9).

15204. TOXIC SUBSTANCES CONTROL ACT. The Toxic Substances Control Act of 1976 (Public Law 94-469), 15 U.S.C. 260, requires EPA to regulate and control harmful chemical and toxic substances in commercial use. Congress enacted TSCA to reduce unreasonable risks from chemicals to human health and the environment. Section 6 of TSCA provides EPA with the authority to regulate hazardous chemical substances and mixtures.

CHAPTER 15

PESTICIDE POLLUTION PREVENTION

SECTION 3: REQUIREMENTS

15300. WASTEWATER DISCHARGES. The discharge of any wastewater from any pesticide formulation, mixing, or equipment cleanup area is prohibited unless permitted under the NPDES permit.

15301. PESTICIDES. Solid wastes that exhibit the Extraction Procedure (EP) toxicity characteristic are hazardous wastes (40 CFR 261). The existing EP defines regulatory levels for 8 metals, 4 insecticides (endrin, lindane, methoxychlor, and toxaphene), and 2 herbicides (2,4-D and 2,4,5-TP). On 29 March 1990, the EPA promulgated the Toxicity Characteristic (TC) and the Toxicity Characteristic Leaching Procedure (TCLP) to replace the EP toxicity characteristic. It also added 25 organic chemicals and regulatory levels to the list of toxicants. All 14 of the toxicants from the EP remained on the list at their same regulatory levels.

15302. WORKER SAFETY AND HEALTH. The OSHA Hazard Communication Standard (29 CFR 1910.1200) requires that all personnel working with HM such as pesticides be given specific training, that MSDS's be available, and that a Hazard Communication Plan be developed at each installation.

1. **Industrial Hygiene.** Under OPNAVINST 5100.23B, pest control operations shall be thoroughly evaluated to accurately identify and quantify potential health hazards. Industrial hygiene functions to accomplish that evaluation include workplace assessment, exposure assessment, a workplace monitoring plan, monitoring records, exposure evaluation, and periodic evaluations.

2. **Personal Protective Equipment.** Appropriate personal protective devices; e.g., face shields, respirators, eye protection, impervious gloves, and protective clothing, shall be used by personnel engaged in pesticide application. Respirators shall be selected from those approved by the National Institute for Occupational Safety and Health for the pesticides used.

3. **Medical Examinations.** The medical department shall provide appropriate medical surveillance for personnel engaged in routine pest control operations. Medical surveillance is primarily directed toward the measurement of cholinesterase activity to estimate inhibition by organophosphate and carbamate compounds.

4. **Pesticide Labels.** All pesticide containers shall bear an EPA-approved label. Service containers used for formulating or transporting pesticides at the job site shall be marked with the appropriate signal word, the identification of the pesticide and the concentration, and the identification and location of the person responsible for the container. A copy of the complete EPA label for each pesticide used shall be available at each mixing site.

5. **Material Safety Data Sheets.** Pest control facilities shall maintain an MSDS for each pesticide formulation stored or used at the installation. Pesticide applicators shall be familiar with the MSDS information for any pesticide to which they may be exposed in the workplace.

6. **Training.** Personnel shall be trained under the DoD Plan for Certification of Pesticide Applicators,

which includes correspondence training, on-the-job training (OJT) and attendance at a pesticide applicator certification course sponsored by a DoD training center. Installations shall use an OJT program developed in coordination with the pest management consultant (PMC) for new pest control personnel. Enrollment approval by a DoD PMC is required for correspondence training and for initial training courses leading to DoD certification offered by the DoD training centers. Successful completion of a correspondence course is required for candidates before attempting initial core and category training at a DoD training center.

15303. PESTICIDE USE. Where alternatives exist, selective or target-specific pesticides shall be used in lieu of broad-spectrum pesticides to minimize adverse effects on the environment. The use of preventive routine or scheduled periodic pesticide treatments is prohibited unless approved by the PMC concerned and based upon surveillance information or past pest problems. When pesticides are used, they shall be limited to the least amount needed for effective control. PMC's shall consider the risks and benefits of pesticide use on a case-by-case basis. The overall effects of pesticide use shall be identified in developing programs and strategies for cost-effective control in installation programs.

15304. PESTICIDE STORAGE

1. Recommended procedures for storage of pesticides are found in 40 CFR 165. Storage sites should be selected by considering the amount, toxicity, and environmental hazards of the pesticides, and the number and sizes of containers. Flooding should be unlikely, and drainage should be contained. Pesticides should be stored in a dry, well-ventilated separate room, building, or covered area provided with fire protection. The area shall be secured and posted with identification signs. Personnel and equipment decontamination facilities shall be provided with proper collection and treatment of wastewater. Each pesticide shall be classified and segregated with containers checked regularly for corrosion and leaks.

2. Pesticide wastes that are also hazardous wastes are subject to the land disposal restrictions prohibiting storage of hazardous wastes unless in tanks or containers on site and solely for accumulating sufficient quantity for proper treatment or disposal.

15305. PESTICIDE DISPOSAL

1. **General.** Disposal of pesticides, their containers, and related wastes is closely regulated. The technology for disposal is changing rapidly. General guidance for hazardous wastes includes minimization by saving rinse water to formulate subsequent pesticides, ordering and mixing only what is needed for the mission, and disposing of any hazardous waste in accordance with the installation hazardous waste management plan. Guidance for disposal is provided through the cognizant PMC's on a case-by-case basis.

a. **FIFRA Requirements.** Recommended procedures for the disposal of pesticides, pesticide containers, and residues are found in 40 CFR 165. The preferred method is disposal by incineration. For some wastes, burial in special landfills or chemical degradation may need to be considered.

b. **RCRA Requirements.** Pesticide wastes that are also hazardous wastes, either because they are listed or because they exhibit a characteristic, are also regulated under RCRA. As discussed in chapter 9, generators are subject to the land disposal restrictions (40 CFR 268) and must treat the waste to specified levels before land disposal. The regulations for most of the pesticide hazardous wastes were promulgated 8 May 1990.

2. **Administration Procedures.** When EPA regulations are issued to cancel or restrict the use of a pesticide, an expensive disposal problem may develop if installations do not immediately cease procurement and exhaust current stocks of the pesticide, if permitted. In such situations, commands shall be advised of the EPA suspension date, and whatever action is required for the proper disposal of the pesticide. The alternatives, to either exhaust stocks through use or to return material, shall be determined by the Armed Forces Pest Management Board (AFPMB) and the DLA based on inventories prepared by the installations.

15306. MEMORANDUM OF AGREEMENT (MOA). Many installation pest management programs are covered by an MOA established between DoD and State regulatory agencies regarding pesticide use. In general, MOA's authorize purchase of restricted-use and State limited-use pesticides at retail outlets, and pesticide use on land owned or controlled by the Government within State boundaries. The MOA's also authorize State agency representatives to enter DoD premises to inspect application equipment and sites, observe pesticide use, and sample for pesticide residues. Under the terms of the MOA's, in the event that significant violations or misuse of pesticides are found, information, results, and records concerning the investigation will be turned over to the EPA for disposition under Federal law. Marine Corps activities located where MOA's are established shall attempt to resolve any issues that may arise at the local or State level. Issues that may set a precedent, such as payment of State licensing fees for Marine Corps personnel working on Federal property, or any issue that cannot be agreed upon locally, should be forwarded up the chain of command for resolution. Additional MOA's concerning pest management shall not be entered into without the concurrence of the AFPMB.

15307. PESTICIDE MANAGEMENT PLAN

1. **Development**

a. **Requirements.** Installations that conduct pest control operations shall develop, execute, and maintain a comprehensive Pest Management Plan (PMP). The PMP shall be specific to the installation, or shall be a part of an overall plan where pest control is provided by a support installation. Installations with more than 0.5 work years of pest control effort shall have their own plans. Pest control functions performed or contracted by tenant activities shall be performed under the host installation plan.

b. **Preparation.** Installation PMP's shall be prepared by an activity pest manager with guidance from the cognizant NAVFACENGCOM Division or medical officer. Plans shall include scheduled pest control project sheets to identify the work. Subsequently, only new or deleted projects shall be submitted for the annual review/approval process.

c. **Content.** All plans shall include a description of related parts of the pest management program, such as role in mission support; significant health, economic, environmental, and regulatory issues; staffing; and resources. The plan shall address both current and anticipated problems. Control measures shall emphasize an integrated approach and preventive or scheduled maintenance based on prior and ongoing surveillance.

d. **Approval.** Plans shall bear review signatures of the installation public works officer and the medical officer, and the cognizant NAVFACENGCOM. An installation pest management plan is implemented by the signature approval of the installation CG/CO.

2. **Review Naval Environmental Health Center (NAVENVIRHLTHCEN)**

a. **Onsite Reviews.** Programs and plans shall be maintained through technical onsite reviews by medical and NAVFACENGCOM PMC's and under any MOA's in effect. The reviews will determine installation compliance with the plans and projects, evaluate effectiveness of control operations, identify deficiencies, and provide additional recommendations to keep the installation's plan current. Additionally, these shall ensure that installation programs comply with the Federal Insecticide, Fungicide and Rodenticide Act, Clean Water Act, Resource Conservation and Recovery Act, and Toxic Substances Control Act. Written copies of pest management reviews shall be provided to the installation and other PMC's, as appropriate, and will include code 37 and NAVFACENGCOM (code 1634). Marine Corps activities shall forward information copies of installation plans and onsite technical reviews to the CMC (LFL). Installations shall advise the reviewing PMC of their progress in implementing program recommendations and appropriate corrective actions.

b. **Review Criteria.** Generally, installation programs shall be reviewed on site annually. Established programs shall be reviewed less frequently if the installation meets certain criteria for a extended review schedule. More frequent reviews are required for rapidly expanding programs or installations with significant discrepancies.

c. **Plan Revision.** To maintain plans in a current state, installation pest management plans shall be revised annually by notification of program changes submission of only new or deleted projects.

15308. AERIAL APPLICATIONS. Aerial pesticide applications are often required for area control of insects, related arthropods, and weed control. However, since a large part of the environment will be exposed to the pesticide, aerial dispersal shall be performed only after the risks and benefits of such an application have been carefully evaluated. Further, the proposed operation must be coordinated with the appropriate Federal, State, and local authorities. Aerial application projects, prepared per DoD Directive 4150.7, which addresses the DoD Pest Management Program (NOTAL), shall be reviewed and approved by a PMC certified for aerial application pest control. If suppression of potential disease vectors is involved, the operation shall be validated and coordinated by a medical officer and NAVFACENGCOM PMC, respectively. Approvals shall be obtained prior to applications, and the projects shall be included in the installation's PMP. Before beginning those control measures, the CG/CO may be required by local or State regulation to obtain a written agreement from applicable authorities and waiver of claim ("hold harmless") from each adjacent property owner.

CHAPTER 15

PESTICIDE POLLUTION PREVENTION

SECTION 4: MARINE CORPS POLICY

15400. GENERAL. The Marine Corps policy shall be to comply with applicable Federal, State, and local pesticide pollution prevention laws and regulations.

15401. APPLICATOR TRAINING AND CERTIFICATION. Marine Corps personnel, military or civilian, who select or recommend pesticide products and equipment for use or who apply or supervise the application of restricted-use pesticides on a Marine Corps installation, shall be certified under the "Department of Defense Plan for Certification of Pesticide Applicators," as described in OPNAV Instruction 6250.4 (NOTAL). In required States, contract applicators shall be similarly certified to apply pesticides to Government property.

15402. PESTICIDE SPILLS. Pesticide facilities (storage, mixing, washdown, and transportation) shall be included in the installation oil and hazardous substance spill contingency (chapter 11 of this Manual).

15403. DISPOSAL. Waste pesticides shall be disposed of under applicable requirements.

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CHAPTER 15

PESTICIDE POLLUTION PREVENTION

SECTION 5: RESPONSIBILITIES

15500. COMMANDING GENERAL/ COMMANDING OFFICER

1. Comply with OPNAV Instruction 6250.4.

2. Request technical assistance for pesticide programs from COMNAVFACENGCOM.

3. Budget for routine, recurring costs to operate and maintain pest control facilities in compliance with applicable requirements.

4. Identify as early as possible and submit per procedures in chapter 3, of this Manual, nonrecurring, nonroutine corrective projects required to bring all pesticide use, storage, and disposal operations into compliance with applicable standards. Comply with applicable requirements in disposing of excess and waste pesticides.

5. Ensure that wastewaters discharged from pesticide mixing facilities are complying with applicable pretreatment or NPDES permit requirements and other applicable Federal, State, or local requirements.

6. Ensure that all applicable pesticide transportation, storage, and formulation areas are addressed in the installation HS release contingency plans.

15501. NAVAL FACILITIES ENGINEERING COMMAND

1. The Naval Facilities Engineering Command provides surveillance of pest populations.

2. Provides onsite technical reviews and assistance in preparation of PMP's.

3. Conducts performance evaluation, monitoring for effectiveness, and documentation of control efforts; and complies with all appropriate Federal and State quarantine measures.

4. The Chief, Bureau of Medicine and Surgery, is responsible for the following:

a. Performing inspections and surveys to determine the species, source, location, and density of vectors; providing recommendations relating to sanitation standards and practices affecting the presence and abundance of vectors and utilization of vector control methods; evaluating effectiveness of vector control measures; providing information on all appropriate personal protective measures against vectors; coordinating with civilian and other Government agencies having vector control problems that may affect naval personnel at or in the vicinity of a command; and complying with appropriate public health quarantine measures.

b. Conducting inspections and developing recommendations to ensure that pesticides are used safely following current directives; providing guidance on personal protective measures for personnel whose responsibilities include application of pesticides; and conducting medical surveillance programs for pesticide applicators.

c. Developing an emergency plan for vector and pest control during a vectorborne disease outbreak or disaster.

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CHAPTER 15

PESTICIDE POLLUTION PREVENTION

SECTION 6: TERMS AND DEFINITIONS

15600. TERMS AND DEFINITIONS. The following terms and definitions are to be used for this chapter:

1. **Activity Pest Manager.** A DoD-certified employee designated by the installation CG/CO, responsible for developing and implementing the installation pest management plan.

3. **Area Medical Entomologist.** The senior uniformed Medical Service Corps entomologist designated by the Navy Environmental Health Center to provide technical service for a given geographic area.

4. **Direct Supervision.** Management control by a responsible individual who is on site and in visual and voice communication with the applicator.

5. **Insecticide.** A substance or preparation used for killing insects (e.g., ticks, spiders, or centipedes).

6. **Integrated Pest Management.** A comprehensive approach to pest management or prevention that includes various chemical, physical, and biological suppression techniques, the habits of the pest, and the environment. IPM programs emphasize preventive (planned) pest control measures in lieu of corrective (unplanned) measures wherever cost-effective.

5. **Material Safety Data Sheet (MSDS).** Documents, maintained by the pest control facilities, that contain chemical, health, and safety data on each pesticide formulation stored or used at the installation.

6. **Pest.** Arthropods, birds, rodents, nematodes, fungi, bacteria, viruses, algae, snails, marine borers, snakes, weeds, and other organisms (except for human or animal disease-causing organisms) that adversely affect military operations; the well-being of man and animals; attack real property, supplies, or equipment; or are otherwise undesirable.

7. **Pest Controller.** The OPM title for individuals who work under Job Standard 5026 in pest control functions is: pesticide applicator or pest control operator. See also "pesticide applicator."

8. **Pest Management Consultant.** PMC's are technical specialists who have command program oversight responsibilities and provide guidance and information on the management of pest populations for Navy and Marine Corps commands and installations ashore and units afloat. PMC's are trained in biology, medical and economic entomology, or other life sciences. In the DON, consultants include commissioned medical entomologists in the Medical Services Corps, civilian applied biologists, and natural resources specialists of the Naval Facilities Engineering Command.

9. **Pest Management Plan (PMP).** A written document for the design, execution, and maintenance of an installation pest control program.

10. **Pesticide.** Any substance or mixture of substances that destroys or repels pests; any substance or mixture of substances used as a plant regulator, defoliant, or desiccant.

11. **Pesticide Applicator.** Personnel trained in pest control technology who apply or supervise the application of pesticides. There are several types, all of whom are considered "commercial pesticide applicators" under the Federal Insecticide, Fungicide and

Rodenticide Act. DoD military or civilian personnel certified under "DoD Plan for the Certification of Applicators of Restricted Use Pesticides," DOE Regulation 4150.7-M of 13 January 1978, and whose duties include the application of pesticides or supervision of other pesticide applicators. Certified applicators must be qualified in the pest control category appropriate for the work being performed; e.g., structural pest control, ornamental and turf pest control, public health pest control, household pest control. Another type includes civilian or DoD employees who apply pesticides under State certification. All certified pesticide applicators must hold certification in the pest control category appropriate for the work. Another type includes uncertified applicators, either military or civilian, who work under the direct supervision of a DoD- or State-certified pesticide applicator.

12. **Restricted-Use Pesticide.** A U.S. Environmental Protection Agency classification for pesticides that may potentially cause unreasonable adverse effects on the environment including injury to the applicator even when label directions are followed. EPA restricted-use pesticides may be procured and used only by certified pesticide applicators or by persons under their direct supervision.

Appendix D

Pest Management Policy and Procedures for Navy and Marine Corps Activities WESTNAVFACENGCOM Instruction 6250.1C

DEPARTMENT OF THE NAVY
WESTERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
900 COMMODORE DRIVE
SAN BRUNO CALIFORNIA 94066 2402

Copy to control
per control
12-30-93
DS

IN REPLY REFER TO

WESTNAVFACENGCOMINST 6250.1C
162A
10 MAR 1993

WESTNAVFACENGCOM INSTRUCTION 6250.1C

Subj: PEST MANAGEMENT POLICY AND PROCEDURES FOR NAVY AND MARINE CORPS ACTIVITIES

Ref: (a) Federal Insecticide Fungicide and Rodenticide Act as Amended (Public Law 92-516)
(b) DOD Directive 4150.7 of 24 Oct 83 subj: DOD Pest Management Program
(c) DOD Plan for Certification of Pesticide Applicators of Restricted Use Pesticides (DOD 4150.7-M)
(d) CMC/OPNAVINST 6250.4A of 28 Nov 90 subj: Pest Management Programs
(e) NAVFACINST 6250.3H of 12 Sep 91 subj: Applied Biology Program Services and Training
(f) NAVFACINST 6250.14A of 19 Dec 90 subj: Self-Help Pest Control
(g) OPNAVINST 5090.1A of 2 Oct 90 subj: Environmental and Natural Resources Program Manual

Encl: (1) DOD Pesticide Applicator Certification Program
(2) Procedures for Pesticide Applicator Recertification
(3) Annual Activity Pest Management Plan and Purchase Approval Request
(4) Criteria for Biennial Pest Management Program Reviews
(5) Economic Utilization of Pest Control Personnel
(6) Pest Control Work Performed by Contract
(7) Definitions

1. Purpose. To establish pest control policy and procedures for implementing efficient, safe, and environmentally acceptable pest management programs at Naval and Marine Corps activities served by Western Division, Southwest Division and Engineering Field Activity Northwest, Naval Facilities Engineering Command (WESTNAVFACENGCOM, SOUTHWESTNAVFACENGCOM and EFA NORTHWEST).

2. Cancellation. WESTNAVFACENGCOMINST 6250.1B of 24 Jun 87

3. Applicability and Scope. This instruction applies to activities served by WESTNAVFACENGCOM, SOUTHWESTNAVFACENGCOM and EFA NORTHWEST. Services are provided by the WESTNAVFACENGCOM Applied Biology Staff, Code 162A. The scope of this instruction includes all in-house and contractual programs involving pest management and pesticide use and includes, but is not limited to, public works, Officer in Charge of Construction/Resident Officer in Charge of Construction (OICC/ROICC) offices, non-appropriated fund activities, natural resource management, and outlease farming/grazing programs.

4. General Certification Policy. In accordance with references (a) through (d), all personnel who supervise pest control operations or who apply pesticides for hire must be certified. In accordance with reference (d), all activities requiring at least 0.25 productive workyears of pest control annually (including contractual services), or requiring the application of restricted use pesticides, or having sensitive environmental conditions, shall employ at least one person certified in accordance with reference (c). A back-up certified person is highly recommended. Reference (c) provides the basic Plan for Certification of Applicators of Restricted Use Pesticides for the Department of Defense (DOD) as approved by the Environmental Protection Agency (EPA). All personnel who inspect contracted use of pesticides must be trained in accordance with references (b) through (e).

a. Certification/Recertification of Pesticide Applicators. Pesticide Applicator training will consist of three elements: apprenticeship training, correspondence training, and formal classroom training. Written examinations are required for the last two elements to achieve certification; see enclosure (1). Recertification is required every three years and consists of attendance at a course sponsored by WESTNAVFACENGCOM or other Engineering Field Division (EFD) and supplemented by instructors and instructional materials from one of the DOD training centers. The purpose of the course is to re-evaluate the applicator's level of competency in pest control through written examinations and to provide training in new technology. Recertification is valid for three years and shall be accomplished by the last day of the month in which the original certificate expires. See enclosure (2).

b. Commercial service contract personnel must be state certified in accordance with reference (a) in the category in which the pesticide is to be applied. The application of pesticides under contract shall only be made by state certified applicators or under the direct (line-of-sight) supervision of state certified applicators. [Note: For activities located in the State of California, only "state licensing" meets the qualification requirements for contract personnel who apply or supervise the application of pesticides for hire as required by references (a) through (e).]

5. Appointment of the Activity Pest Manager/Pest Control Coordinator.

a. As required by reference (c) and (d), each activity that is required to have a Pest Management Plan shall designate an individual as an activity Pest Manager (called "Pest Control Coordinator" for activities in the WESTNAVFACENGCOM Applied Biology Staff geographic area of responsibility) to manage and coordinate the activity pest management program.

b. The Pest Control Coordinator is designated by the installation Commanding Officer and shall be trained and certified in compliance with references (b) through (d) to facilitate activity inter-departmental planning, scheduling, and surveillance for the various categories of pest control.

In addition to the regular technical pest control competency training, these activity selected individuals shall receive continuous training, sponsored by WESTNAVFACENGCOM, in the environmental and regulatory aspects of pest management and serve as the activity level focal point for pest control advice and coordination.

Normally, for activities performing pest control with government personnel, the Pest Control Coordinator is located in the public works shops and is also supervisor of the activity pest control technicians. The Coordinator is specifically trained in how and to what extent to meet State and local standards in pesticide management, as required by Presidential Executive Order 12088, and assists the activity pest control program in complying with Federal, State, and local regulations pertaining to quarantine pests, the U.S. Migratory Bird Treaty Act, U.S. Environmental Protection Agency pesticide use restrictions, U.S. Department of Agriculture animal damage control requirements, and DOD pest control contract inspection requirements. The Coordinators are in continuous consultation with professional pest management specialists of WESTNAVFACENGCOM who provide, or make available from other specialty sources, expert advisory assistance.

c. The Pest Control Coordinator shall ensure that pesticides used on the activity are properly reported and that the installation's pesticide use records are filed by specific site of application.

6. The Annual Activity Pest Management Plan and Purchase Approval Request (WESTDIV Form 6250/14, Attachment A of Enclosure (3)). This form is the basic part of the Activity Pest Management Plan as outlined by reference (d) and is to serve as the activity planning and communications document in such specific example areas as the following: (a) scheduling pest control work, (b) timely purchase of pesticides, (c) coordinating the program with Natural Resources, Medical, and local advisory and regulatory agencies, and, (d) providing a medium for final WESTNAVFACENGCOM approval of both specific pesticide applications, and other non-pesticide pest control measures. The Plan also provides an annual one-time medium for technical purchase approval for all specific pesticide formulations specified on the Plan.

a. Developing the Plan. The Pest Control Coordinator develops the Plan in accordance with training and consultation provided by WESTNAVFACENGCOM. Informal solicitation of WESTNAVFACENGCOM technical assistance in developing the Plan is encouraged.

(1) In developing the Plan, the Pest Control Coordinator should make liberal use of the past year's Plan and the most recent WESTNAVFACENGCOM technical program review in order to determine estimated pesticide application frequencies and times of seasonal operations.

(2) The specified rates of pesticide application, however, should be precise or should specify a relatively narrow range which is compatible with EPA registered labeling and with economical control of the target pest (including weed) species. These rates can be checked by WESTNAVFACENGCOM during the informal review assistance process in order to help in precluding violations of Public Law 92-516 ("consistent with the label"), reference (a).

(3) In developing the Plan, Navy Public Works Centers consultation with customer activities is required in order to assist in defining the customer's annual pest control needs.

(4) The Plan shall also list all planned purchases of pest control devices and pesticide dispersal equipment as these also require technical purchase approval. Approval on selection of pesticide dispersal equipment appropriate for an activity's pest control program shall be obtained from the WESTNAVFACENGCOM Applied Biology Staff.

(5) The mechanics of developing, coordinating and approval procedures are described in enclosure (3).

b. Monitoring the Plan. The complete activity Pest Management Plan will be monitored through on-site reviews by the Navy Bureau of Medicine and Surgery (BUMED) and WESTNAVFACENGCOM Pest Management Consultants as directed by reference (d). These reviews, annual or biennial as outlined in enclosure (4), will determine activity compliance with the Plans, identify deficiencies and provide additional control or program recommendations to keep the activity's Plan current. Written copies of pest management reviews shall be provided to the activity and other Pest Management Consultants, as appropriate. As required by reference (d), activities shall advise WESTNAVFACENGCOM on their progress in implementing program recommendations and appropriate corrective actions. The activity's major claimant will be included in the distribution of the reviews when repeated significant deficiencies are noted.

7. Self-Help Pest Control. A self-help pest control program in family housing, reference (d), is required. Activity requirements will be reviewed upon request or during the on-site pest management program review. Reference (f) provides further guidance for a self-help program. Only those pesticides and pest control devices indicated in the self-help program portion of the activity's Annual Pest Management Plan and approved by the WESTNAVFACENGCOM Applied Biology Staff shall be distributed to responsible occupants of family housing.

8. Economic Utilization of Pest Control Personnel. On-site WESTNAVFACENGCOM technical pest control reviews sometimes indicate the need for more judicious use of pest control personnel. See enclosure (5).

9. Pest Control Performed by Contract. DOD Directive 4150.7 and CMC/OPNAVINST 6250.4A require that contract specifications for pest control services receive professional review prior to solicitation. Accordingly, every contract specification, all or a portion of which involves pest control services on Navy property within the geographic area served by the WESTNAVFACENGCOM Applied Biology Staff, shall have WESTNAVFACENGCOM Applied Biology Staff review and approval prior to advertisement or procurement of services. This is in order to assure (a) operational efficiency; (b) protection of the environment; (c) compliance with Department of Defense reporting requirements; and (d) contractor licensing and certification requirements. The pesticides used must have current Environmental Protection Agency and State label registration for the specific environmental conditions for which use is intended and be approved via the installation's Annual Pest Management Plan.

Specialty assistance in developing environmentally acceptable pest control (including weed control) contracts is available from WESTNAVFACENGCOM upon request. See enclosure (6).

10. Policy on Certified Supervision/Inspection of Pest Control Work. References (a) through (d) effect requirements for supervision/inspection of pest control work performed both by in-house personnel and by contract. This is primarily for the purpose of exercising specialized control over the injection of pesticides into the environment, and for assuring the safety of those who might otherwise be unduly exposed to pesticides. In accordance with references (a) through (d), pesticides shall only be applied by or under the "direct supervision" of certified personnel. The extent of pest control contract inspection needed to assure effective job accomplishment and compliance with environmental requirements is provided in enclosure (6).

11. Definitions. The terms used in this instruction are defined in enclosure (7).

12. Action. In view of the regulatory and environmental aspects of pest management now applicable to activities pursuant to reference (a), it is essential that addressees comply with current directives references (b) through (g). Non-appropriated fund entities and non-DOD entities under Navy stewardship are also required to conform to references (a) through (d) and (g).

W. H. Lewis

W. H. LEWIS
VICE COMMANDER

DISTRIBUTION

WESTNAVFACENGCOM List:
A (less 4)
D (less 2, 6, 13)
E
F (1)
G (less 4, 5)
H (less 5, 7-10, 13)
HH (less 4-6, 8)
SOUTHWESTNAVFACENGCOM San Diego
ROICC MCLB Barstow
ROICC NAF El Centro
ROICC MCAS El Toro
ROICC Long Beach Area
ROICC MCAGCC Twentynine Palms
ROICC MCAS Yuma
OICC MCLB Barstow
OICC NAF El Centro
OICC Long Beach Area
OICC NAVHOSP Long Beach
OICC MCAS El Toro
OICC WPNSTA Seal Beach
OICC MCAGCC Twentynine Palms
OICC MCAS Yuma
OICC NAVSTA Long Beach
NAF El Centro
NAVHOSP Long Beach
NAVPRO Pomona
NAVSHIPYD Long Beach
NAVSTA Long Beach
WPNSTA Seal Beach
CG MCAGCC Twentynine Palms
MCLB Barstow
NAS Miramar
PWC San Diego
CG MCB Camp Pendleton
CG MCRD San Diego
NAVCOMSTA San Diego
NTC San Diego
NAVOCEANSYSCEN San Diego
NAVSTA San Diego
NSC San Diego
NAS NORTH ISLAND San Diego
NAVPHIBASE CORONADO San Diego
NAVHOSP San Diego
NAVRESREDCOM REG 19 San Diego
NAVREGCONTCEN San Diego
COMNAVBASE San Diego
EFA NORTHWEST
ROICC Adak
ROICC Ketchikan
ROICC NAS Whidbey Island
ROICC Everett
ROICC Amchitka
OICC NAVUSEAWARENGSTA Keyport
OICC SUBASE Bangor
OICC NAVSHIPYD PUGET SOUND Bremerton
OICC NAS Whidbey Island
OICC NAVSTA PUGET SOUND Seattle
COMNAVBASE Seattle
NAS Whidbey Island
NAVHOSP Bremerton
NAVHOSP Oak Harbor
NAVRADSTA (T) Jim Creek
NAVCOMSTA Puget Sound
DTRCEN DET Bayview
NAVSHIPYD PUGET SOUND Bremerton
NAVSTA PUGET SOUND Seattle
NSC PUGET SOUND Bremerton
NAVUSEAWARENGSTA Keyport
NAVSECGRUACT Adak
SUBASE BANGOR
NAS Adak
NAVRESREDCOM REG 22 Seattle
NAVSECGRUACT Anchorage
COMCABWEST El Toro
CG MCAS El Toro
MCAS Yuma
COMNAVAIRPAC San Diego
COMNAVSURFPAC San Diego

DOD PESTICIDE APPLICATOR CERTIFICATION PROGRAM

1. General Overview of Certification Program. Developmental training is provided for previously untrained and inexperienced personnel who embark on a probationary program of not more than two years. The certification process consists of apprenticeship, correspondence, and formal classroom training. Written examinations are required for correspondence and classroom training to achieve certification.

2. Training and Certification Procedures.

a. Apprenticeship Training. Trainees shall participate in apprenticeship training under the supervision of an experienced DOD certified individual. The apprenticeship training program shall be tailored to the pest control requirements of the trainee's work place and will include, but not be limited to, the following:

(1) pest and problem identification
(2) shop operation
(3) program planning
(4) equipment maintenance
(5) selection of controls
(6) safety and first aid
(7) equipment operation
(9) pesticide formulation and application techniques
(10) record keeping and reporting
(11) pesticide disposal and security
(12) pesticide handling, to include storage, mixing, transportation
(13) pest control operations

The WESTNAVFACENGCOM Applied Biology Staff may vary or waive the apprenticeship training phase based upon the individual's previous training and experience and future duties. Apprenticeship training will culminate in an on-site practical evaluation of the trainee's competency and progress by a pest management professional or certified Pest Control Coordinator. The "Supervisor's On-the-Job Training Check-off List" (Attachment (A)) shall be used to document the trainee's progress in accomplishing specific pest control tasks. This list may be modified by the supervising DOD certified individual, as approved by the WESTNAVFACENGCOM Applied Biology Staff, to fit the activity's pest management program. Previously trained or experienced personnel may be evaluated at any time. Failure to obtain a satisfactory evaluation of the apprenticeship training may result in a recommendation for the removal of the trainee from the installation pest control program.

b. Correspondence Training. Within 3 months of assignment as a trainee, the individual shall be enrolled in a WESTNAVFACENGCOM approved correspondence training course. The application (DD Form 1556 "Request, Authorization, Agreement, Certification of Training and Reimbursement") must be approved by the WESTNAVFACENGCOM Applied Biology Staff before submission. The course must be successfully completed within six months from the date of enrollment. Successful completion is a prerequisite to formal classroom training.

Correspondence courses offered by Colleges and Universities may be approved by the WESTNAVFACENGCOM Applied Biology Staff. Previous State certification will not exempt trainees from correspondence training.

c. Formal Classroom Training. Following successful completion of the correspondence training, formal classroom training must be obtained at one of the DOD training centers listed below. Normally the training for WESTNAVFACENGCOM served activities is accomplished at the Alameda, California Center where instruction in area pest conditions and regulations is presented. Formal training will provide trainees with the minimum standards of competency and shall be expanded to meet substantive State standards as appropriate. The application for admission to the training course (DD Form 1556 "Request, Authorization, Agreement, Certification of Training and Reimbursement") shall be submitted to the WESTNAVFACENGCOM Applied Biology Staff for approval prior to enrollment. The "Supervisor's On-the-Job Training Check-off List" (Attachment (A) and the results of the applicant's correspondence course shall be submitted with the training request. Correspondence training may not be substituted for the formal training.

(1) The DOD Training Centers are:

AMEDD Center and School
Preventive Medicine Division; Medical Zoology Branch
Fort Sam Houston, TX 78234-6100
Phone: DSN 471-5270/4278 Commercial (512) 221-5270/4278

Navy Disease Vector Ecology and Control Center
Naval Air Station, Bldg. 130
Alameda, CA 94501-5039
Phone: DSN 993-2806 Commercial (510) 263-2806

Navy Disease Vector Ecology and Control Center
Naval Air Station, Box 43
Jacksonville, FL 32212-0043
Phone: DSN 942-2424 Commercial (904) 772-2424

3770 Technical Training Group
Sheppard AFB, TX 76311
Phone: DSN 736-5792 Commercial (817) 676-5792

757 TAS/Aerial Spray
Youngstown MAP, OH 44473-5008
Phone: DSN 346-1513 Commercial (216) 392-1513
(Aerial Application of Pesticides only)

There is no charge to attend these training center courses for DOD employees, but the travel and per diem costs must be borne by the installation or training command sponsoring the trainee(s). Contractor personnel may attend on a space available basis for training only at contractor expense which may include a tuition fee. DOD certification is not available to contractor personnel.

(2) All students are required to pass both portions of pest control training (core and category) to be DOD certified. The core phase is a prerequisite and provides basic information common to all pesticide applicators and pest control supervisors. Category courses applicable to an individual's duties may be grouped to facilitate training and specialization. The DOD pest control categories are:

(2) Forest
(3) Ornamental and Turf
(5) Aquatic
(6) Right-of-Way
(7) Industrial, Institutional, Structural, and Health Related
(8) Public Health
(10) Demonstration and Research
(11) Aerial Application

These and other pest control categories may be addressed as separate blocks of instruction as the training situation dictates.

(3) Written examinations will be based upon course content and study materials made available to applicators or inspectors. Separate examinations shall be given for the core section and each category section.

(4) Training centers will recommend that the WESTNAVFACENGCOM Applied Biology Staff (certifying official) certify an individual in designated categories upon the individual's attainment of a score of 70% or better on each respective examination. During the core phase, an individual who fails with a score of 50% or less will be recommended by the training center for removal from pest control duties and he/she will not be allowed to retake examinations. This recommendation will be forwarded to the installation and major command Pest Management Consultant for action.

(5) Individuals who score between 50% and 70% will be allowed to continue with category training and to retake the examination(s) failed. Personnel with scores between 50% and 70% may attempt an immediate re-examination (at the discretion of the course director and the individual's command) or may take up to 90 days to re-study and undergo re-examination. Re-examination may be administered by the educational center supporting the individual's installation. A second failure will result in a recommendation by the training center to the WESTNAVFACENGCOM Applied Biology Staff to remove the individual from pest control duties. However, he/she may be recommended for retraining.

SUPERVISOR'S ON-JOB-TRAINING CHECK LIST

Trainee's Name _____ Activity _____

JOB	JOB SITE	SUPERVISORS INITIALS AND DATE
Roaches, German		
Roaches, Amer./Oriental		
Roaches, Brown-banded		
Roaches, Crack & Crevice Treatment		
Ants, Argentine		
Ants, Fire		
Ants, Wall-nesting		
Ants, Carpenter		
Ants, Harvester		
Ants, Pharaoh		
Ticks, Inside and Out		
Bird mites		
Black widow/Brown recluse spiders		
Pillbugs/sowbugs		
Silverfish		
Bees in wall		
Bees outside		
Wasps, inside or out		
Ground-nesting hornets		
Crickets, bait & spray		
Stored product pests, tarp fumigation		
Stored product pest, ULV		
Stored product pest, rail car opening		
Clover mites on or in structure		
Norway and roof rats in & around structures		
Norway rats - outdoors waterfront or dumpsite		
Rat proofing		
House mice, baiting		
House mice, tracking powder		
House mice, snap & multiple catch traps		

ATTACHMENT A
Enclosure (1)

JOB	JOB SITE	SUPERVISORS INITIA AND DATE
House mice, glue boards		
Field mice invasion		
Flies, including source control		
Mosquitoes, surveillance adult and larval		
Mosquito control larval and ULV		
Birds, baiting		
Birds, trapping or by other mechanical means		
Termites, subterranean		
Termites, drywood		
Termites, Formosan		
Ground squirrels or gopher baiting		
Ground squirrels, fumigants		
Feral cat or dog trapping		
Tree Spraying		
Selective weed control		
Non-selective weed control		
Residual Weed control		
Shop organization		
Medical Surveillance program with baseline cholinesterase test		
OSHA respirator program		
Use and maintenance of protective clothing		
Orderly vehicle layout		
Material Safety Data Sheets and Right-to-Know Rule		
Pesticide storage and handling		
Pesticide and container disposal		
Spill prevention and clean-up		
Equipment repair and maintenance		
Forms and Reports		

ATTACHMENT A
Enclosure (1)

ECONOMIC UTILIZATION OF PEST CONTROL PERSONNEL

1. Overuse of Uncertified Personnel. In compliance with the DOD requirement that "restricted/controlled use pesticides shall be applied only by or under the direct supervision of trained and certified personnel", some activities employ uncertified personnel as directly supervised helpers, thereby retaining two persons on each job. Except for necessary training purposes, this often results in waste because of the relatively few pest control jobs on which two persons are needed. Generally, at western United States activities, such use of uncertified personnel is uneconomical except as:

a. laborers on termite crews
b. laborers, surveyors, etc., for certain elements of mosquito control
c. laborers in the application of certain dry herbicide applications
d. drivers for vehicular drawn power pesticide dispersal equipment
e. tradespersons in the preservative dipping or brushing of wood when permitted by the Environmental Protection Agency registered label.

2. Overuse of Certified Personnel. For jobs involving particularly hazardous materials, or on which the logistics of the job clearly so dictate, the use of more than one certified person is justifiable. However, almost all such pest control (or pest surveillance) jobs fall into the following limited number of categories:

a. Weed Control. Jobs include those on which one person is needed for driving a vehicle or moving hoses while the other is either actively operating an "orchard gun" type spray nozzle or actively watching a spray boom to insure uniform pesticide coverage.

b. Fumigation. Two persons always should be used on fumigation jobs (except for treatment of burrowing rodents away from occupied buildings) so that one may administer first aid and contact a physician in the event of pesticide poisoning.

c. Large Scale Mosquito Control or Vegetation Spraying Operations. This applies only in those cases in which one or two persons must operate vehicular drawn power equipment while the other drives or where aircraft application is employed. This does not include routine tree spraying where the spray rig is parked while a conventional 150-foot hose is used to spray vegetation around individual buildings.

d. Non-Routine Jobs where Unusual Toxic or Operational Hazard Exists.

3. Tradition. Frequently the practices of "doubling up" on pest control jobs for reasons of safety in the use of hazardous materials is based on tradition rather than on reliable toxicological determinations, or on established trade practice.

4. "One Person-One Job" Concept. The most efficient pest control work is accomplished with one certified person operating from one safely and properly equipped vehicle with locked storage.

5. Action

a. Most pest control jobs should be routinely performed by a single certified individual except those excluded in paragraphs 1 and 2, preceding.

b. Any on-board uncertified personnel who routinely perform pest control duties should be scheduled to complete certification requirements or be replaced with personnel trainable in accordance with the DoD Plan for Certification of Pesticide Applicators of Restricted Use Pesticides so that each person can work alone without direct supervision.

c. The utilization of two pest control personnel for treatment of individual or multiple dwelling units and galleys should be discontinued where practiced. When occupant circumstances exist in which the integrity of the operator might be questioned on individual jobs, two technicians should be used only at the discretion of the Housing Manager and the Public Works or Maintenance Officer and handled on a case-by-case basis.

d. Vehicle availability should be reviewed with the objective of equipping approximately eighty five percent of all pest control personnel with an individual fully equipped vehicular unit with lockable storage compartment(s). Activities with as few as three full time certified personnel should equip each of the three technicians with a separate vehicle.

One other time when more than one certified person is used on one job is when a job is performed within a time restraint.

J.G.

Appendix E

MCAS El Toro and MCAS Tustin
Pest Management Program
(Station Order 11321.1A)

KD221

UNITED STATES MARINE CORPS
Marine Corps Air Station
El Toro (Santa Ana), California 92709-5001

StaO 11321.1A
1JE/3810
27 Mar 90

STATION ORDER 11321.1A

From: Commanding General
To: Distribution List

Subj: MCAS EL TORO AND MCAS TUSTIN PEST MANAGEMENT PROGRAM

Ref: (a) DoD Directive 4150.7
(b) SECNAVINST 6240.6E
(c) OPNAVINST 6250.4

Encl: (1) Pest Control Manager Appointment Letter
(2) Pesticide Use and Inventory Report Form
(3) Pesticide Storage Sites and Inventory Letter
(4) Discrepancy Report on Pesticide Usage and Handling

1. Purpose. To implement Department of Defense (DoD) and the Commandant of the Marine Corps (CMC) policies regarding the administration of the Pest Management Program at Marine Corps Air Station (MCAS) El Toro and MCAS Tustin.

2. Background

a. Reference (a) implemented DoD policy on installation pest management programs and authorized professional pest management personnel or certified pesticide applicators authority to manage the installation programs.

b. Reference (b) implemented Navy and Marine Corps policy to protect and enhance the quality of the environment through strict adherence to all applicable regulating standards, by initiating, planning and programming actions, and by executing such actions as per appropriate environmental regulations and executive orders for pest management and pesticide applications.

c. Reference (c) promulgated policy and procedures to the Navy and Marine Corps for implementing pest management programs.

3. Policy. It is Navy and Marine Corps policy to:

a. Safeguard human health and morale by controlling pests that transmit diseases or annoy personnel.

b. Maintain real property and prolong the life of facilities, structures, and material by preventing pest attacks.

c. Enhance environmental quality through the protection of desirable plant and animal resources.

d. Ensure that pesticides are used in a manner which will protect the safety and health of Navy and Marine Corps personnel.

e. When practicable, minimize reliance on chemical pest control procedures through an intergrated pest management approach using the full spectrum of control techniques.

f. Ensure compliance with quarantine matters related to protecting plants, animals, and human health.

g. Comply with laws concerning pesticide application, storage, and disposal.

4. Responsibilities. The Commanding General, MCAS El Toro and the Commanding Officer, MCAS Tustin are responsible for the Pest Management Program. The Commanding General of MCAS El Toro under the lead activity concept will designate the activity's pest manager for MCAS Tustin. Enclosure (1) is a sample letter to be used in designating the activity's pest manager.

a. The Director of Facilities Management will be responsible for:

(1) Developing budgetary and implementing pest management program as per reference (c).

(2) Designating an individual as an activity pest manager (APM) to manage and coordinate the activity Pest Management Program.

b. The activity's Pest Manager will be responsible for:

(1) Developing, coordinating, and administrating the activity's Pest Management Program.

(2) The submission of the Activity Pesticide Usage Reports to designated recipients as per instructions in enclosure (2).

(3) Relaying and communicating information to applicators from the Entomological Field Division (EFD), Western Division, Naval Engineering Command, and other technical sources on information pertaining to pesticide use, and coordinating with EFD regarding training requirements.

(4) Making proper notification to the individual unit, Fire Department, Environmental Office, and the Station Inspector regarding the types and locations of stored pesticides for safe handling in case of emergency. Enclosure (3) is to be used for this purpose.

(5) Coordinating applicable safety training with the Ground Occupational Safety Office for all applicators.

(6) Possessing the requisite knowledge of applicable laws and regulations concerning the environmental and regulatory aspects of pest management, as well as serving as the activity level focal point for pest control advice and coordination.

(7) Monitoring all use of pesticides on the activity, by government employees or contract personnel.

(8) Reporting discrepancies concerning pesticide use, handling, and storage to the activity concerned with distribution made to the Fire Department, Environmental Office, and Station Inspector using enclosure (4).

(9) Ensuring environmental concerns are considered whenever chemical controls are contemplated. Alternative methods must be evaluated and used if economic and environmental benefits indicate that non-chemical controls can be effective.

(10) Ensuring work is done by or under the direct supervision of certified or licensed pesticide applicator, certified or licensed in the appropriate pest control category for the work being performed.

d. Department heads and commanding officers of station activities purchasing and using pesticides are responsible for:

(1) Providing direction to their activities for conformance to this Order.

(2) The safe and proper use and storage of pesticides by their subordinates.

(3) Submitting a "Pest Management Plan and Purchase Approval Request" (12ND-WesDiv 6250-14 form) for their activity for review by the Pest Control Coordinator no later than 30 August of each year. This form will project pesticide use for the following fiscal year to ensure compliance with the activity's Pest Management Plan. For contractors performing pest operations, the Pest Management Plan and purchase approval request will be submitted to the Pest Control Coordinator annually or whenever a new chemical is going to be used. This applies to all facilities support contracts.

5. Concurrence. The Commanding General, 3d Marine Aircraft Wing and the Commanding Officers, Marine Corps Air Station Tustin, Combat Service Support Detachment 14, 1st Force Service Support Group and Marine Aircraft Group 46 concur in the provisions of this Order.

J. E. UNDERWOOD
Chief of Staff

DISTRIBUTION: MCAS: A

StaO 11321.1A
27 Mar 90

PEST CONTROL MANAGER APPOINTMENT LETTER

Station Heading

(File)
(Originator Code)
(Date)

From: Commanding General
To: (Pest Control Manager)
Via: Director, Facilities Management Department

Subj: APPOINTMENT OF PEST MANAGER

Ref: (a) StaO 11321.1

1. You are hereby appointed as the Pest Control Manager. As such, you are required to abide by all laws, rules, and regulations regarding the application, storage, and purchase of pesticides used aboard MCASs El Toro and Tustin per the reference.

ENCLOSURE (1)

StaO 11321.1A
27 Mar 90

PESTICIDE USE AND INVENTORY REPORT FORM

Date:

Inventory: _____ Pesticide Use: _____

NAME OF PESTICIDE	LOCATION	AMOUNT	CONCENTRATION
(1)	(2)	(3)	(4)

(1) List generic name and contents.
(2) List building number as well as interior or exterior of building.
(3) Enter pounds, ounces, gallons.
(4) List pounds or ounces per gallon, percentage per gallon, pounds per acre.

ENCLOSURE (2)

StaO 11321.1A
27 Mar 90

PESTICIDE STORAGE SITES AND INVENTORY LETTER

(Unit Heading)

(File)
(Originator Code)
(Date)

From: Director, Facilities Management Department
To: (Unit Name)

Subj: PESTICIDE INVENTORY AND BUILDING LOCATION

Encl: (1) Pesticide Inventory

1. The enclosure is provided for your information and review as to the types and amounts of hazardous material being stored in the locations noted. You should be aware as to the particular hazard each material poses, so if an incident at these locations occurs, appropriate safety precautions may be used.

Copy to:
Fire Department
Environmental
Station Inspector

ENCLOSURE (3)

StaO 11321.1A
27 Mar 90

DISCREPANCY REPORT ON PESTICIDE USAGE AND HANDLING

Date:

From: (Pest Control Manager)
To:

Subj: PESTICIDE DISCREPANCY REPORT

1. The following discrepancies were noted:

   Date: _____ Location: _____

   Time: _____ Organization: _____

_____

_____

_____

2. Personnel notified of discrepancies:

   Name: _____ Title: _____

   Organization: _____

   Date: _____ Ext: _____

3. Corrective action recommended:

_____

_____

_____

(Signature)

ENCLOSURE (4)

Appendix F

Pesticide Spill Prevention and Management

Armed Forces Pest Management Board

TECHNICAL INFORMATION MEMORANDUM NO. 15

PESTICIDE SPILL PREVENTION AND MANAGEMENT

Published and Distributed by
DEFENSE PEST MANAGEMENT INFORMATION ANALYSIS CENTER
Forest Glen Section
Walter Reed Army Medical Center
Washington, DC 20307-5001

June 1992

DEPARTMENT OF DEFENSE
ARMED FORCES PEST MANAGEMENT BOARD
FOREST GLEN SECTION, WRAMC
WASHINGTON, D.C. 20307-5001

June 18, 1992

MEMORANDUM FOR DISTRIBUTION

SUBJECT: TIM 15: Request for Timely Feedback

The revision cycle for this TIM is two years. Your user input is the most important factor in making it serve customer need. The final date for input to the next edition will be March 15, 1994.

We appreciate your contribution to the continuous improvement of this TIM. Please give your corrections, additions and comments to CDR Tim Dickens at DSN 291-5365, (301) 427-5365 by FAX (301) 427-5466 or by letter.

FOR THE CHAIRMAN:

ROBERT W. CLEGERN
Colonel, BSC, USAF
Executive Director

PESTICIDE SPILL PREVENTION AND MANAGEMENT

TABLE OF CONTENTS

ACKNOWLEDGEMENT

This revision of Technical Information Memorandum (TIM) 15 was prepared through the efforts of the Armed Forces Pest Management Board Pesticides, Equipment and Real Property Committees.

Real Property Committee, Chaired by Mr. William Gebhart provided technical assistance and guidance for the revision of this TIM.

Mr. Kenneth Olds, Army Environmental Hygiene Agency, skillfully collated this revision and provided it to DPMIAC on computer disk. Mrs. Mary Trutt produced the final reformatted draft for publication.

PURPOSE

Most bases/installations use a wide variety of pesticides ranging from those that are practically nontoxic for mammals to those that are highly toxic. Included are insecticides, herbicides, fungicides, fumigants, nematicides, rodenticides and other miscellaneous pesticides. Each of these pesticides has particular characteristics that require special attention. This document does not take into account the special characteristics of each group to any great extent. It was developed as a basic guideline to developing plans for pesticide spill prevention, control and cleanup.

DISCLAIMER

TIM 15 discusses specific proprietary products in a few cases where examples are needed. Such information does not constitute a recommendation or an endorsement of these products by the Department of Defense. Neither should the absences of an item be interpreted as DoD disapproval.

I. INTRODUCTION AND PURPOSE

Practically all DoD facilities routinely do pest control operations. The magnitude of these operations depends largely on the size of the facility and whether the work is contracted or done in-house. Both dilute and concentrated pesticides are used. Use of these chemicals involves handling, storage, application and disposal of various pesticides.

Most bases/installations use a wide variety of pesticides ranging from those that are practically nontoxic for mammals to those that are highly toxic. Included are insecticides, herbicides, fungicides, fumigants, nematicides, rodenticides and other miscellaneous pesticides. Each of these pesticides has particular characteristics that require special attention. This document does not take into account the special characteristics of each group to any great extent. It was developed as a basic guideline to developing plans for pesticide spill prevention, control and cleanup.

The probability of a pesticide spill can be effectively reduced by an education program training personnel in:

a. Pesticide spill prevention, control and cleanup procedures.

b. Methods of handling and storing pesticides.

c. Shop safety and fire regulations.

Additional spill prevention practices should include:

a. Properly securing pesticides in vehicles and shops.

b. Inspecting storage areas for leaking or damaged containers on a monthly basis.

c. Adequate advance contingency planning for controlling and cleaning up spills.

d. Providing and properly maintaining spill kits at all pesticide storage and mixing facilities and pesticide vehicles.

In spite of planning and training, spills do occur. Typical spills range from a 1-gallon service container falling off a vehicle to several 55-gallon drums punctured by a forklift. The worst case of a spill would be exploding containers in a fire. The problem for all persons concerned is the management of the spill, the cleanup and the proper disposal of all the residual material.

II. LEGAL REQUIREMENTS

Most pesticide spills occur in areas such as loading docks, warehouses and mixing areas. If the spill did not result in a release to the environment (i.e., no lost material such as might occur in a confined area, diked pad with no outlet, or on a concrete floor of an enclosed facility) and there is no threat to air, soil, or water environments, then the spill is not reportable to external regulatory agencies. If the spill occurred under uncontrolled conditions such as onto grounds outside the shop and the amount spilled equalled or exceeded a so-called reportable quantity (RQ) of Part 117 of the Clean Water Act (CWA) or Part 302 or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), then the spill must be reported off-base because it affects the environment. This reporting procedure will be explained later.

Consequently, report all spills to your chain-of-command regardless of the amount spilled. Base/installation environmental engineers/coordinators can help in making a RQ determination and in properly reporting hazardous substance releases to regulatory agencies. Failure to report a RQ spill is a violation of Federal law.

Regulations promulgated under the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 1510) require federal agencies to develop plans and procedures for containment and cleanup of accidental discharges of hazardous substances. In compliance with these regulations, pesticide facilities shall be included in base/installation hazardous substance spill contingency plans. Procedures for the handling and disposal of spill cleanup residues according to requirements of the Resource Conservation and Recovery Act (RCRA) also should be addressed in the Contingency Plan.

III. SPILL PREVENTION

The best means by which a spill can be reduced or prevented is to take precautionary measures such as providing adequate storage facilities for all pesticide chemicals, monthly inspection of these facilities, and ensuring that emergency equipment is on hand for spill cleanup. The following guidelines should be followed for reducing the probability and severity of a spill:

A. General Procedures

1. Train personnel in proper procedures for handling pesticides during receipt, storage, formulation, loading, application and disposal.

2. Advise and train pest control personnel in proper spill prevention, emergency response and containment procedures.

3. Identify locations and operations where spills are likely to occur.

4. Prepare pesticide spill emergency response and spill control countermeasure plans for shops and storage areas consistent with the total hazardous materials management and spill contingency plans for the facility, i.e. Navy Hazardous Materials Management Guide (Reference 14).

5. Post emergency phone numbers in conspicuous locations.

6. Prepare and maintain spill kits.

7. Inspect storage areas monthly and spill kits quarterly.

B. Storage Procedures

Proper storage of pesticides should be accomplished employing the following procedures:

1. Store all pesticides with labels plainly visible. Containers should be checked at least monthly to ensure that lids are tight and containers are not damaged. They should be stored in rows off the ground to provide effective access.

2. Incompatible pesticides, such as herbicides and insecticides, must be stored separately, maintaining sufficiently safe segregation, in order to avoid cross-contamination or adverse reactions, for example, phenoxy and urea herbicides shall be physically separated (not share the same air ventilation system) from all insecticides. Where separate air supplies are not feasible, the pesticides should be arranged so that clean air flows continuously from the insecticides past the herbicides and out of the facility.

3. Containers must be stored in well ventilated (six room air changes per hour), dry storage areas. Temperatures should be between 40°-100° F. Stored pesticides should be protected from freezing temperatures and direct sunlight.

4. Emergency procedures (fire, spill, etc.) should be conspicuously posted near work areas and exits. A complete inventory of the pesticides contained in the storage area should be given to the local fire department along with the name and phone number of the pest control shop supervisor and building custodian.

5. Containers found leaking or damaged should be handled as follows:

(a) Don appropriate protective equipment and ensure that backup responders are available.

b) Separate clean undamaged containers from those that are leaking.

(c) Isolate, for later cleanup, any containers that have been contaminated by leakers.

(d) Leaking containers should be repackaged. Overpacking may be employed only if the pesticide and its container are being prepared for disposal. Repackage when necessary by obtaining containers of the same type used originally to store or transport the pesticide chemicals. The numbers on bottom of the containers, either Department of Transportation (DOT) or Federal Specifications (Fed. Spec.), refer to the proper container specifications to be used for repackaging. Broken bags can be placed in heavy-duty plastic bags and sealed with twist ties. Leaking drums can be temporarily sealed using epoxy glue, fiberglass patch kits, or other suitable materials on hand.

(e) All labeling must be duplicated on the repackaged pesticide containers.

(f) Transfer contents of each leaking container by pouring or siphoning the contents into the new container. When pouring, use a wide-mouth funnel. Use only a mechanical siphon. NEVER START SIPHON BY MOUTH. Use a forklift to lift large containers. Mechanical pumps also can be used for transferring liquids to new containers.

(g) Clean any spilled pesticides from the outside of contaminated containers by using decontamination and/or cleaning solutions (household detergent). Collect all rinseate in a drip pan and store in a marked drum for proper disposal. Clean the inside of the damaged container by triple rinsing. All collected spilled materials may be used in accordance with the label. All rinseate can be saved for future use as a diluent. Refer to the NEPSS Hazardous Waste Disposal Guide (Reference 4) for proper disposal guidance.

(h) All contaminated areas should be thoroughly cleaned after completing the repackaging operation (refer to Appendix B).

IV. SPILL CONTINGENCY PLANNING

Contingency plans call for pre-planning the response to and cleanup of a spill that happens. Site specific pesticide spill contingency plans should be developed for all pest control shops and pesticide storage areas. This plan should be included in, or attached as an annex to, the facility's Hazardous Waste Management Plan, Spill Contingency Plan and Hazardous Substance Spill Prevention Control and Countermeasure Plan. The plan should outline specific procedures to be followed when a pesticide spill occurs and clearly identify the roles and responsibilities of each individual involved in the overall response scheme. Such a plan will save valuable time and will effectively reduce human risk and environmental damage from an accidental spill. The plan should include the following information:

A. Notification list including emergency phone number for:

1. Designated base/installation spill coordinator or the contact designated in the base/installation spill contingency instruction.

2. Nearby offices and buildings requiring evacuation.

3. Base/installation fire and security departments.

4. Base bioenvironmental engineer (or equivalent, depending on the service).

5. EFD/NEPSS hazardous waste management contact (Navy only).

6. Nearest emergency medical unit.

7. Local poison control center (800-424-9300) (See Reference 8).

8. CHEMTREC (800-424-9300) or National Agriculture Chemical Association (NACA) operator.

9. National Response Center at Coast Guard headquarters (800-442-8802). To be notified immediately by voice when spills occur in U.S. waters.)

10. Local Emergency Planning Committee (LEPC) and State Emergency Response Commission (SERC).

B. A complete inventory of all pesticides on hand, including EPA registration numbers and manufacturer's name and address.

C. A detailed, up-to-date sketch of the pesticide shop or storage area should be included. This sketch or map should show exterior runoff patterns, nearby water sources (wells, lakes, streams, etc.), water drainage patterns and times, volume capacity of holding basins, available gate valves in storm drainage system, storage location of specific pesticides, and location of spill kits and other emergency response equipment.

A copy of this plan should be given to the base/installation's spill coordinator and the fire department for use in responding to emergencies. Another copy of this plan should be maintained in a predetermined highly visible location within the shop or storage area. Spill kits should be included as part of a spill contingency plan. Being properly prepared for handling pesticide spill emergencies requires preparation of a pesticide spill kit and understanding the steps to be followed when a spill occurs. The kit should contain an emergency spill procedures sheet and should be labeled and designated only for use in managing pesticide spills. Recommended materials for inclusion in the pesticide spill kit are listed in Appendix A. Most items can be

obtained through the federal supply system or local manufacturers and suppliers.

The exact size and contents of each spill kit will vary with the amount and type of pesticides handled by the shop. Each pest control shop vehicle that transports pesticides also should have a small spill kit for cleaning up and decontaminating spills from service containers or 1-gallon sprayers. The exact contents of each spill kit should be tailored to the needs of the individual shop. The spill kit should be able to contain and clean-up the largest container or sprayer at the site.

V. SPILL EMERGENCY PROCEDURES

When a pesticide spill occurs, specific procedures should be followed for providing first aid, notifying proper authorities, and cleaning up and decontaminating the spill area. Personnel working with pesticides or in areas containing pesticide chemicals should be adequately trained for quick evacuation and proper spill prevention and emergency procedures as follows:

A. Identification

Determine the pesticide involved in the spill incident.
Information such as formulation, percent active ingredient, and manufacturer's name and address should be obtained.

B. Safety and First Aid

All persons working with pesticides should be well trained in basic first aid and evacuation procedures. It must be emphasized that when managing any spill the most immediate concern is for the health and well being of persons in and around the immediate spill area.

First aid kits and personal protective equipment should be maintained at pest control shops and storage areas and carried on pest control vehicles. In addition, the telephone numbers of the local medical unit and poison control center should be posted in visible locations and always carried by pest control personnel when on the job.

C. Care of Injured

It is recognized that pesticide spill emergencies will differ, but the immediate concern should be to minimize contamination of personnel. Although the sequence may vary, the following basic procedures should be accomplished as rapidly as possible. PRIOR TO ENTERING A CONTAMINATED AREA, DON PERSONAL PROTECTIVE EQUIPMENT (PPE).

1. Quickly assess the spill to determine if personnel are involved.

2. Eliminate all sources of ignition (e.g., pilot lights, electric motors, gasoline engines) in order to prevent the threat of fire or explosion from inflammable vapors (if present).

3. If personnel are involved, the rescuer should quickly don necessary protective equipment and remove the injured to a safe location upwind from the spill. If the spill occurs in an enclosed area, doors and windows should be opened to enhance ventilation of the area.

4. If necessary, remove contaminated clothing from the victim and/or rescuer, then wash affected areas of body with soap and water. Administer additional first aid as required by the symptoms/signs and label, which may include flushing contaminated eyes with clean water for 15 minutes.

5. Obtain medical assistance for injured or contaminated persons. NOTE: do not leave injured or incapacitated persons alone. Always instruct someone to stay with them until proper medical assistance is provided or a physician has been informed of the incident.

D. Site Security

Secure the spill site from entry by unauthorized personnel by roping off the area and posting warning signs. The boundary should be set at a safe distance from the spill. If necessary, obtain assistance from the base/installation's police or security unit.

E. Containment and Control

Spilled pesticides must be contained at the original site of the spill. The pesticide must be prevented from entering storm drains, wells, water systems, ditches, and navigable waterways by following these procedures:

1. Don appropriate protective equipment from a spill kit or the pest control shop.

2. Prevent further leakage by repositioning the pesticide container.

3. Prevent the spill from spreading by trenching or encircling the area with a dike of sand, absorbent material, or, as a last resort, soil or rags.

4. Cover the spill. If the spill is liquid, use an absorbent material appropriate to the type of material. If dry material, use a polyethylene or plastic tarpaulin and secure. NOTE: Use absorbent materials sparingly as they also must be disposed of as wastes.

F. Pesticide Spill Reporting

Not all pesticide spills warrant reporting to EPA or the Coast Guard. However, spills that involve pesticides equal to or exceeding the designated reportable quantity (RQ) specified in EPA's Clean Water Act list of hazardous substances and the Comprehensive Environmental Response, Compensation, and Liability Act list of hazardous substances (see Appendix C for RQs of major pesticides) must be reported. All pesticide spills should be reported in accordance with each service's regulations (Air Force, AFR 19-8; Navy OPNAV Notice 5090.1A, Environmental Protection; Army, AR 200-1), and the base/installation's spill contingency instruction. Pesticide spills should be reported to the spill coordinator designated in the base/installation's spill contingency instruction. The coordinator in turn will report the spill to EPA or the Coast Guard, as required.

The individuals or agencies in IV.A. should be notified, as appropriate, when spills occur. These contacts also can provide information on how to cope with problems that may be encountered in handling pesticide spills. The telephone numbers of contacts should be posted as part of the Pest Control Shop or base/installation's emergency plan.

G. Cleanup

Adequate cleanup of spilled pesticides is essential in order to remove any health or environmental hazards. When cleaning up pesticide spills, it is advisable NOT TO WORK ALONE and to make sure the area is properly ventilated and that appropriate protective equipment is used by all personnel. Responses to incidental releases of hazardous substances where the substance can be absorbed, neutralized, or otherwise controlled at the time or release by employees in the immediate release area, or by maintenance personnel are not considered to be emergency responses. However, if the release is not an incidental release, only qualified, trained emergency personnel should undertake cleanup operations. Minimum initial training and refresher training requirements are specified in the Occupational Safety and health Standards of 29 CFR 1910.120.

1. Dry spills (dusts, wettable powders, granular formulations) should be picked up in the following manner:

(a) Immediately cover powders, dusts, or granular materials to prevent them from becoming airborne. This can be done by placing a polyethylene or plastic tarpaulin over the spilled material. Weight the ends of the tarp, especially the end facing into the wind. Begin cleanup operations by systematically rolling up the tarp while simultaneously sweeping up the spilled pesticide using a broom, shovel, or dust pan. While sweeping, avoid brisk movements in order to keep the dry pesticide from becoming airborne. If indoors, a cover may not be necessary. When practical, light

sprinkling with water may be used instead of a cover.

(b) Collect the pesticide and place it plastic or metal containers. Heavy-duty plastic bags should be used as a last resort as many pesticides may eat through the plastic bags. Properly secure and label the bags, identifying the pesticide and possible hazards. Set the bags aside for later disposal.

2. Liquid spills should be cleaned up by placing an appropriate absorbent material (floor-sweeping compound, sawdust, sand, etc.) over the spilled pesticide. Work the absorbent into the spill using a broom or other tool to force the absorbent into close contact with the spilled pesticide. Collect all spent absorbent material and place into a properly labeled leakproof container.

3. Depending upon the spilled substance, contaminated soil may have to be removed to depths where no detectable amounts of the substance are evident. Residues may need to be placed in properly labeled leakproof containers. For this determination, contact the base/installation environmental engineer/coordinator.

H. Decontamination

Decontamination solutions can be used for decontaminating surfaces and materials where spills of dust, granular, wettable powder, or liquid pesticides have occurred. However, the bulk of the spilled pesticide should be cleaned up or removed before applying any decontaminant. After cleaning up the bulk material, apply the appropriate decontamination solution and allow one to six hours reaction time before using an absorbent material.

Depending on the location of the spill and the pesticide spilled. chlorine bleach, caustic soda (lye, sodium hydroxide) or lime can be used to effectively decontaminate most spill areas. Many pesticides, especially the organophosphate pesticides, decompose when treated with lye or lime. Fewer pesticides are decomposed by bleach (sodium hypochlorite) (Appendix B).

Dry decontaminants should be spread thinly and evenly over the spill area. Then, using a watering can, lightly sprinkle the area with water to activate the decontaminant. Liquid decontaminants should be premixed and applied with a watering can to the spill area. Decontaminants should be applied in amounts no greater than specified in Appendix B.

The preceding procedures must be repeated until all the spilled pesticide is removed. Clean all equipment used for spill cleanup with detergent and appropriate decontaminants. Collect all spent decontaminants and rinse water and place them in labeled leakproof containers. Clothing and gloves that cannot be decontaminated must be placed in leakproof containers for proper disposal. Depending on the particular surface, the following additional procedures may need to be accomplished as specified.

1. Nonporous surfaces should be washed with detergent and water. The appropriate decontamination solution should be thoroughly worked into the surface using a long-handled broom, scrub brush, or other equipment as needed. Then the decontamination solution is soaked up using absorbent material. The spent absorbent material is then placed into a labeled leakproof container for disposal.

2. Soil. If pesticide containers have leaked or if pesticides have been spilled on a soil surface, depending upon the spilled substance, contaminated soil may have to be removed to depths where no detectable amounts of the substance are evident. Residues may need to be placed in properly labeled leakproof containers.

3. Porous materials such as wood may not be adequately decontaminated. If contamination is great enough to warrant, they must be removed and replaced with comparable new materials.

4. Tools, vehicles, equipment and any contaminated metal or other nonporous objects can be readily decontaminated using detergent and the appropriate decontamination solution (refer to Appendix B). However, smaller quantities of the decontamination solution may be required.

The decontamination solution can be applied to contaminated equipment by soaking the equipment in a pail filled with solution or using a scrub brush. All tools and surfaces must be thoroughly rinsed with sparing amounts of clean water. All rinse water and spent decontamination solution should be collected in drip pans or other suitable containers and transferred to a properly labeled leakproof drum for disposal.

I. Disposal

All contaminated materials, including cloth, soil, wood, etc., that cannot be effectively decontaminated as described in this guide must be removed and placed in a sealed leakproof container. All containers must be properly labeled and transported in accordance with Department of Transportation (DOT) regulations by EPA-permitted hazardous waste haulers for disposal in a hazardous waste disposal facility (incinerator, landfill site, etc.) under current EPA or state permit. Information about specific disposal sites, container labeling, rinsing, and disposal is contained in the NEPSS Hazardous Waste Disposal Guide (Reference 4). Additional disposal information for stock pesticide formulations can be found in the Consolidated Hazardous Items List (CHIL) (Reference 6). Coordinate with the base/installation Environmental Coordinator on disposal procedures.

VI. POST-SPILL PROCEDURES

After the spill has been decontaminated, the following actions should be taken to

ensure that decontamination has been adequate:

A. Sample Collection and Analysis

Representative samples of affected environmental areas (soil, water, sediment, etc.) should be collected and analyzed for pesticide content to ensure that decontamination was effective. Pesticide residue sampling procedures are contained in Reference 5.

B. Investigation of Cause

An investigation into the cause of the spill and any contributing events should be undertaken in order to ascertain why the spill occurred. This information will be of benefit in making future spill prevention recommendations. In addition, the spill episode should be well documented for future reference.

C. Disposal

Disposal of contaminated materials should be accomplished. Guidance on disposal can be obtained from those agencies listed in paragraph VII.

VII. INFORMATION AND ASSISTANCE

Comprehensive information about pesticide spill, prevention, cleanup and decontamination can be obtained from the respective Naval Facilities Engineering Command Engineering Field Division (EFD) Applied Biologist; USAF Occupational and Environmental Health Laboratory, Brooks AFB, TX; or Army Environmental Hygiene Agency, Aberdeen Proving Ground, MD. If these sources are unable to provide the necessary information about a spill, the following additional sources are available:

A. National Agricultural Chemical Association Pesticides Safety Team Network (PSTN) (800) 424-9300. The function of the PSTN is to provide advice and on-site assistance when spill situations warrant. This network operates through the Chemical Transportation Emergency Center (CHEMTREC). CHEMTREC contacts the pesticide manufacturers who provide specific information regarding the handling of pesticide spills. If needed, a spill response team can be requested to assist in spill cleanup operations.

B. EPA Oil and Hazardous Material Technical Assistance Data System (OHM-TADS). OHM-TADS is a computerized information retrieval system that can provide information about more than 2,000 hazardous substances, including pesticide chemicals. This system can be accessed through the respective NAVFAC EFD Environmental Branch Offices or by contacting NESO Code 2512. OHM-TADS also

can be accessed through the regional EPA oil and hazardous material spill coordinators.

C. U.S. Coast Guard Chemical Hazard Response Information System (CHRIS) (800) 424-8802. The Coast Guard can provide guidance about methods for handling spills. Assistance can be obtained by contacting local Coast Guard stations or the Coast Guard district office or National Spill Response Team.

VIII. REFERENCES

1. Designation of Hazardous Substances, 40 CFR 116.

2. Determination of Reportable Quantities for Hazardous Substances, 40 CFR 117 and 40 CFR 302.

3. Spill and Hazardous Substances Pollution Contingency Plan, 40 CFR 1510.

4. NEPSS Hazardous Waste Disposal Guide, NESO 20.2-011.

5. NEPSS Pesticide Residue Sampling Guide, NESO 20.2-012.

6. Consolidated Hazardous Item List (CHIL), NAVSUP Publication 4500, Cog 1, Stock No, 0588-00-005-000, April 1979.

7. Department of Transportation, US. Coast Guard Chemical Hazard Response System, 1974, CG-446, Volumes 1-4.

8. Directory of Poison Control Centers, U.S. Department of Health, Education and Welfare, Division of Hazardous Substances and Poison Control, Washington, D.C., Stock Number 1712-0129.

9. Safety Guides for Handling and Warehousing Class B Poisons (Pesticides), National Agricultural Chemicals Association, 1155 15th Street, NW, Washington, D.C. 20005.

10. Department of Transportation Hazardous Materials Transportation Regulations 49 CFR 171-192.

11. Managing Pesticide Spills, 1976 Technical Release, ESPC 071101, National Pest Control Association, 8150 Leesburg Pike, Vienna, Virginia 22180. (800) 678-NPCA.

12. Decontaminating Accidental Spills of Pesticides, National Agricultural Chemicals, October 1969, pp 8-9.

13. Guidelines for the Disposal of Small Quantities of Unused Pesticides, EPA-670/2-75-057, June 1978, US Environmental Protection Agency, Cincinnati, Ohio 45268.

14. Navy Hazardous Materials Management Guide, NESO 20.2-024A.

15. NIOSH/OSHA Pocket Guide to Chemical Hazards.

APPENDIX A

SPILL KIT CONTENTS

SPILL KIT CONTENTS

Proper handling of pesticide spills requires prior preparation of a spill kit containing directions for use if a spill incident should occur. The kits should be labeled and designated for use in handling pesticide spills only, and should be strategically placed where spills are most likely to occur. The label should list the contents, and the kit should he sealed to discourage pilferage.

Spill kits may be assemble by procuring items through the Federal Supply System, or from commercial sources. Additional suppliers may be obtained by contacting the EFD Applied Biologist or Command Entomologist.

The following is a list of equipment required for shop and vehicle spill kits:

Shop kit

1 55-gallon open-head drum
1 set of instructions
4 pairs of neoprene gloves
2 pairs of unvented goggles
2 respirators and pesticide cartridges
2 aprons (chemical resistant)
2 pairs of rubber boots
2 pairs of 100% cotton coveralls
1 dustpan
1 shop brush
1 square-point "D" handle shovel
1 dozen polyethylene bags w/ties (heavy ply)
1 18" pushbroom, synthetic fibers
1 gallon liquid detergent
3 gallons household bleach
80 lbs absorbent material
1 bung wrench
1 drum spigot
1 1-3/8" open-end wrench
1 drum pump (manual)
30 ft 1/2" polyethylene tubing
or 1 25-ft garden hose
1 bung 2 1/2"
1 bung 3/4"
blank labels
1 first aid kit

Vehicle kit

1 instruction sheet
1 5-gallon open-head drum
2 pairs of neoprene gloves
1 pair of unvented goggles
1 respirator and cartridges
1 pair of coveralls
1 dustpan
1 shop brush
10-30 lbs absorbent material
1 pint liquid detergent
6 polyethylene bags w/ties (heavy ply)
1 portable eyewash
blank labels
1 first aid kit
1 pr rubber boots
1 apron

Most equipment and materials needed for spill emergency response and for maintaining spill kits can be obtained through the GSA Federal Supply System or local manufacturing companies.

APPENDIX B

PESTICIDE DECONTAMINANTS

PESTICIDE DECONTAMINANTS

Depending on the particular pesticide, chlorine bleach, caustic soda (lye, sodium hydroxide) or lime can be used to decontaminate most spills. For other decontamination/degradation options, refer to Reference 12. Many pesticides, especially the organophosphate pesticides, decompose when treated with lye or lime. Fewer pesticides are decomposed by bleach (sodium hypochlorite). Other pesticides cannot be effectively decontaminated and should only be treated with detergent and water to help in removal. Some examples of common pesticides that can be decontaminated are listed below:

Use Lye or Lime for:	**Use Chlorine Bleach for:**	**Do not use any decontamination Chemicals for these pesticides:**
Atrazine	Calcium cyanamide	Alachlor
Propoxur	Calcium Cyanide	Chloramben
Captan	Chlorpyrifos	Chlordane and other
Carbaryl	Fonophos	Chlorinated hydrocarbons
Diazinon	Merphos	Diuron
Temephos	Lethane	2,4-D
Naled		Maneb
2,4,5-T		Methoxychlor
Malathion		Pentachlorophenol
Acephate		Picloram
Sodium Fluoride		Toxaphene
TCA		Trifluralin
Rotenone		
Silvex		
Cyanazine		
Dalapon		
Dichlorvos		
Dimethoate		
EPN		

USE

A practical guide for applying decontaminants is as follows:

Percent Active Ingredient	Amount of Decontaminant needed
1-10	Use an amount of decontaminant equal to the quantity of pesticide spilled.
11-79	Use an amount of decontaminant equal to 1.5 times the quantity of pesticide spilled.
80-100	The amount of decontaminant used should be equal to twice the quantity of spilled pesticide.

WARNING: There is a slight potential for creating toxic by products when using these procedures. In critical situations, samples of affected components (soil, sediment, water, etc.) should be taken and sent to a laboratory for analysis in order to determine if decontamination was successful.

Lye or Lime

Pesticides amenable to treatment using lye or lime may be decontaminated when mixed with an excess quantity of either of these materials. These materials can be used in either the dry form or in solution. A 10% solution of lye or lime can be made as follows:

Mixing directions: Mix 0.75 pounds of lye or lime in 3.5 quarts of water to make 1 gallon of 10% solution.

Caution: Caustic soda (lye) can cause severe eye damage to persons not properly protected. Protect against contact by wearing unventilated goggles, long-sleeved work clothes with coveralls, neoprene gloves, and chemical-resistant apron. An approved respirator also should be worn. Do not use lye on aluminum surfaces.

Bleach Treatment. Certain pesticides can be degraded by treatment with bleach (sodium hypochlorite). Generally, one gallon of household bleach, which contains approximately 5 percent sodium hypochlorite, should be used per pound or gallon of pesticide spilled. If bleaching powder is used, first mix it with water (one gallon of water per pound of bleach) and add a small amount of liquid detergent. For safety purposes, a preliminary test must be run using small amounts of bleach and the spilled pesticide. The reaction resulting from this test must be observed to make sure reaction is not too vigorous. Do not store near to, or mix chlorine bleach with, amine-containing pesticides. Co-mingling of these materials can cause a violent reaction resulting in fire. Calcium hypochlorite is not recommended as a decontaminating agent because of the fire hazard.

APPENDIX C

REPORTABLE QUANTITIES

FOR MAJOR PESTICIDES

The following list is the reportable quantity (RQ) for many pesticides. Spills of pesticides that may enter waterways in quantities equal to or exceeding the RQ must be reported to the base/installation spill coordinator, the Coast Guard at (800) 442-8802, or to the appropriate EPA regional representative.

Spills involving mixtures of pesticides appearing on the list require reporting only when one or more of the materials in the mixture spilled equals or exceeds the RQ indicated for the specific pesticide and enters or threatens navigable water as defined in 40 CFR 117. The percentage of active ingredients in the specific pesticide product spilled and specific gravities of these materials, including carriers and/or diluents, should be used for determining RQs for each component. Refer to the complete EPA list of hazardous substances (Reference 1) for RQs for additional substances. Specific examples of calculations for determining reportable quantities are contained in this appendix.

The chart provided below can be used to convert percent active ingredients for emulsifiable concentrates to the approximate pounds of actual pesticide per gallon. This chart is provided for convenience and should be used only for purposes of providing initial estimates of spilled pesticide. It is not intended as a supplement to label information indicating pounds actual pesticide per gallon.

Conversion table for Active ingredients in

Emulsifiable Concentrates (EC)

Percent Active Ingredient	lbs/gal
10-12	1
15-20	1.5
25	2
40-50	4
60-65	6
70-75	8
80-100	10

List of Reportable Quantities (RQ) for Major Pesticides

Major pesticides including diluents and carriers appearing on the EPA list of hazardous substances have been extracted and are provided below. In general, a spill requires reporting to EPA or the National Response Center when the amount of active ingredient spilled equals or exceeds the RQ for the specific pesticide as indicated below. Users of the following table should be aware that the EPA lists of hazardous substances and RQs are subject to change.

The table also presents information on the Superfund Amendments and Reauthorization Act (SARA) Section 302 Extremely Hazardous Substances, the presence of any of which, in sufficient quantities, requires certain emergency planning activities to be conducted. The Threshold Planning Quantity (TPQ) for these substances is shown under the column "Section 302 TPQ." EHS RQ or the reportable quantities of Extremely Hazardous Substances are subject to reporting under Section 304 of Title III. If a final RQ has not been assigned under CERCLA to a chemical listed under Section 302, a statutory RQ of 1 pound applies for Section 304 reporting. The EHS column lists the 1 pound statutory RQ for EHSs not listed under CERCLA. SARA Section 313 Toxic Chemicals, emissions or releases of which must be reported annually as part of SARA Title III's community right-to-know provisions. Inerts and pesticides subject to Section 313 are indicated with an "X."

Pesticide	SARA			CERCLA	
	Section 302 TPQ (lbs)	Section 304 EHS RQ (lbs)	Section 313	RCRA Waste Number	Pounds
Acetaldehyde				U001	1000
Acrolein	500		X	P003	100
Aldicarb	100/10,000			P070	1
Aldrin	500/10,000		X	P004	1
Amitrole				U011	10
Aluminum phosphide	500			P006	100
4-Aminopyridine				P008	1000
Aroclor 1016					1
Aroclor 1221					1
Aroclor 1232					1
Aroclor 1242					1
Aroclor 1248					1

Pesticide	SARA			CERCLA	
	Section 302 TPQ (lbs)	Section 304 EHS RQ (lbs)	Section 313	RCRA Waste Number	Pounds
Aroclor 1254					1
Azinphos-ethyl	100/10,000	1			
Azinphos-methyl	10/10,000				1
BHC - alpha					10
BHC - beta					1
BHC - delta					1
BHC - gamma	1000/10,000		X	U129	1
Bromadiolone	100/10,000	1			
Cacodylic acid				U136	1
Captan			X		10
Carbaryl			X		100
Carbofuran	10/10,000				10
Carbophenothion	500	1			
Carbon disulfide	10,000		X	P022	100
Chloramben			X		
Chlordane	1000		X	U036	1
Chlorfenvinfos	500	1			
Chlormephos	500	1			
Chlormequat chloride	100/10,000	1			
Chorobenzilate				U038	10
Chlorophacinone	100/10,000	1			
Chlorothalonil			X		
Chloroxuron	500/10,000	1			
Chlorpyrifos					1
Coumatetralyl	500/10,000	1			
Coumaphos					10
Crimidine	100/10,000	1			
Cyanophos	1000	1			
2,4-D Acid			X	U240	100
2,4-D salts and esters				U240	100

Pesticide	SARA			CERCLA	
	Section 302 TPQ (lbs)	Section 304 EHS RQ (lbs)	Section 313	RCRA Waste Number	Pounds
DDD				U060	1
DDE					1
DDT				U061	1
Demeton	500	1			
Demeton-S-methyl	500	1			
Diallate			X	U062	100
Diazinon					1
Dicamba					1000
Dichlobenil					100
Dichlone					1
Dichlorvos	1000		X		10
Dicofol					10
Dicrotophos	100	1			
Dieldrin				P037	1
Dimefox	500	1			
Dimethoate	500/10,000			P044	10
Dimetilan	500/10,000	1			
Dinoseb	100/10,000			P020	1000
Dinoterb	500/10,000	1			
Diphacinone	10/10,000	1			
Diquat					1000
Disulfoton	500			P039	1
Diuron					100
Endosulfan	10/10,000			P050	1
Endothall				P088	1000
Endrin	500/10,000			P051	1
Endrin aldehyde					1
EPN	100/10,000	1			
Ethion	100				10
Ethoprophos	1000	1			
Ethylene dibromide			X	U067	1

Pesticide	SARA			CERCLA	
	Section 302 TPQ (lbs)	Section 304 EHS RQ (lbs)	Section 313	RCRA Waste Number	Pounds
Ethylene oxide	1000		X		
Famphur				P097	1000
Fenamiphos	10/10,000	1			
Fenitrothion	500	1			
Fensulfothion	500	1			
Fluoroacetamide	100/10,000			P057	100
Fluometuron			X		
Fonofos	500	1			
Formothion	100	1			
Fuberidazole	100/10,000	1			
Guthion					1
Heptachlor			X	P059	1
Heptachlor epoxide					1
Isodrin				P060	1
Kelthane (dicofol)			X		10
Kepone				U142	1
Lindane	1000/10,000		X	U129	1
Malathion					100
Maleic hydrazide				U148	5000
Maneb			X	U114	
Mephosfolan	500	1			
Methidathion	500/10,000	1			
Methyl bromide	1000		X	U029	1000
Metolcarb	100/10,000	1			
Methomyl	500/10,000			P066	100
Methoxychlor				U247	1
Methyl parathion	500/10,000			P071	100
Mevinphos	500				10
Mexacarbate					1000
Monocrotophos	10/10,000	1			
Naled					10

Pesticide	SARA			CERCLA	
	Section 302 TPQ (lbs)	Section 304 EHS RQ (lbs)	Section 313	RCRA Waste Number	Pounds
Nicotine	100			P075	100
Norbormide	100/10,000	1			
Oxamyl	100/10,000	1			
Paraquat	10/10,000	1			
Parathion	100		X	P089	10
PCNB			X	U185	100
Pentachlorophenol				U242	10
Phorate	10			P094	10
Phosfolan	100/10,000	1			
Phosmet	10/10,000	1			
Phosphamidon	100	1			
Pronamide				U192	5000
Prothoate	100/10,000	1			
Pyrethrins					1
Silvex				U233	100
Sodium arsenate					1
Sodium arsenite					1
Sodium fluoroacetate	10/10,000			P058	10
Strychnine and salts	500			P108	10
Sulfotep	500			P108	10
2,4,5-T acid				U232	1000
2,4,5-T amines					1000
2,4,5-T esters					1000
2,4,5-T salts					1000
TDE				U060	1
Terbufos	100	1			
Tetraethyl pyrophosphate (TEPP)	100			P111	10
Thiram				U244	10

Pesticide	SARA			CERCLA	
	Section 302 TPQ (lbs)	Section 304 EHS RQ (lbs)	Section 313	RCRA Waste Number	Pounds
Triamiphos	500/10,000	1			
Trichloronate	500	1			
Trichlorfon			X		100
Warfarin concentration > 0.3%	500/10,000			P001	100
Warfarin concentration < 0.3%	500/10,000			U248	100
Warfarin, sodium	100/10,000	1			
Zinc phosphide concentration > 10%	500			P122	100
Zinc phosphide concentration < 10%	500			U249	100