

Environmental Standard Operating Procedure			
Originating Office: MCAS Yuma Environmental Department	Revision: Final Supersedes: n/a	Prepared By: EM-Assist, Inc. Kyle R. Petlock	Approved By: Jerry McCluskey
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Title: Pesticide and Herbicide Application

1.0 PURPOSE

The purpose of this Environmental Standard Operating Procedure (ESOP) is to provide environmental guidelines for the application of pesticides and herbicides.

2.0 APPLICATION

This guidance applies to those individuals who apply pesticides and herbicides aboard Marine Corps Air Station (MCAS) Yuma.

3.0 PROCEDURE

3.1 Discussion:

The application of pesticides and herbicides requires spraying of various chemicals in designated areas to prevent pests, noxious weeds, and disease vectors from causing unacceptable damage to operations, people, property, or the environment. Pesticides and herbicides are hazardous materials that must be managed properly in order to avoid impacts to human health and the environment. Because these chemicals are highly toxic, special precautions must be taken in order to avoid human exposure during application. Pesticides and herbicides must be stored in approved containers.

3.2 Operational Controls:

The following procedures apply:

1. Ensure that Material Safety Data Sheets (MSDSs) for materials associated with this practice are current and available for inspection.
2. Ensure training records and certifications are current and available for inspection.
3. Ensure that a turnover folder or desktop procedures are kept for this practice.
4. Wear appropriate personal protective equipment (PPE) including rubber or vinyl gloves, boots, long pants, respirators (full face), tyvek suits or coveralls as necessary and according to the pesticide label.
5. Maintain a fully-stocked spill kit and fire extinguishers in designated locations in vehicles.

6. Ensure that all non-original containers to which pesticides have come in contact with via transfer, transport or application activities are tagged and labeled with all of the same product information regarding chemical content, exposure routes, required PPE, use, application methods, storage, compatibility and disposal as contained on the original product container label.
7. Ensure proper equipment maintenance, including testing equipment before use, replacement of rubber and leather seals, and routine calibrations to ensure proper application rates.
8. Use caution when spraying pesticides near areas that contain surface water or near protected wildlife habitat.
9. Select low toxicity and non-volatile pesticide and herbicide products that do not require multiple applications, when available.
10. Limit the accidental dispersion of pesticides and herbicides by applying the following drift reduction measures:
 - a. Use spray additives that will increase the droplet sizes (within label guidelines) to decrease drift of pesticides and herbicides into adjacent areas.
 - b. Use larger spray nozzle size settings to produce larger droplets and avoid high pressure (in excess of 45 pounds per square inch [PSI]) to produce larger droplets.
 - c. Use wide angle nozzles, lower boom heights and keep the boom stable.
 - d. Avoid spraying when wind is greater than 10 miles per hour (mph) or blowing toward sensitive crops, gardens, dwellings, livestock, wildlife habitat or water sources.
 - e. Use shielded spray booms to keep chemical from drifting.
11. Ensure that personnel wash hands, launder their clothing, and/or shower whenever the possibility of exposure exists.
12. Remain alert to the symptoms of pesticide poisoning (blurred vision, nausea, difficulty breathing, drooling, runny nose, tearing, trembling, etc.). Note that pesticide poisoning symptoms may be delayed up to 12 hours.
13. Never leave pesticide in the application equipment for more than a few hours.
14. Inspect containers and secondary containment daily to ensure they are free of leaks. Document daily inspections and maintain records for up to three years.
15. Properly clean up any spills as soon as they are identified and follow procedures in StaO 6280.3G, Chapter 4, Section 4002 (3)(a)(b), and report the incident to your supervisor.

Additionally record all spills in a log book detailing the date, time, product spilled, quantity, location, cleanup actions taken, and the name of the person reporting the spill. As directed in StaO 6280.3G, ensure that a report containing this information is submitted to the Environmental Department.

16. Maintain daily records that include the following data: chemical type, amounts, uses, dates, places of application, and applicator's names and certification. Pest surveys and inspections should also be included.
17. Compile and report all pest management operations to Naval Facilities Engineering Command Southwest (NAVFACSW) quarterly for specified uses of pesticides, including but not limited to: use of restricted use pesticides or application of pesticides in sensitive species areas.
18. Ensure that warning signs such as "Authorized Personnel Only" and "Chemical Storage Area" are posted, clearly visible and legible from a distance of 25 feet in any direction from the pesticide/herbicide storage areas.
19. Refer to the following ESOPs for additional information: Pesticide Herbicide General; Pesticide Herbicide Storage and Mixing; and Pesticide Herbicide Equipment Washing.
20. If there are any specific situations or other concerns not addressed by this procedure, contact the Environmental Department.

3.3 Documentation and Record Keeping:

The following records must be maintained:

1. MSDSs for all materials associated with this practice.
2. Training records and certifications for personnel.
3. Daily log book containing dates and times of operation, amounts, locations and concentrations of pesticides applied.
4. Hazardous materials inventory (must match Authorized Usage List).
5. Required permits.

3.4 Training:

All personnel must be trained in this ESOP, to include the following, as applicable:

1. 24-hour Hazardous Waste Operations and Emergency Response Training (initial and annual).
2. Pest Applicator training.
3. Pesticide Herbicide General ESOP.
4. Pesticide Herbicide Storage and Mixing ESOP.
5. Pesticide Herbicide Equipment Washing ESOP.
6. On-the-job training.

3.5 Emergency Preparedness and Response Procedures:

Refer to Marine Corps Order (MCO) P5090.2A, Subject: (Marine Corps Environmental Compliance and Protection Manual), Oil/Hazardous Substance Spills (OHSS) and Spill Prevention, Control and Countermeasures (SPCC) Plan for MCAS Yuma.

3.6 Inspection and Corrective Action:

The Environmental Compliance Coordinator (ECC) shall perform or designate personnel to perform inspections. The ECC shall ensure deficiencies noted during the inspections are corrected immediately. Actions taken to correct each deficiency shall be recorded on the inspection sheet.

4.0 REFERENCES

- 29 Code of Federal Regulations (CFR) 1910 (Occupation Safety and Health Standards)
- 40 CFR 156 (Labeling Requirements for Pesticides and Devices)
- 40 CFR 171 (Certification of Pesticide Applicators)
- 40 CFR 262 (Standards Applicable to Generators of Hazardous Waste)
- 40 CFR 265 (Interim Status Standard for Owners, of Hazardous Waste Treatment, Storage, and Disposal Facilities)
- MCAS Yuma StaO 6280.3G Environmental Compliance and Protection Standard Operating Procedure.
- Title 18 AAC (Arizona Administrative Code)
- Department of Defense (DOD) Plan 4150.7-M (DOD Pest Management Training and Certification Manual)
- MCO P4790.2C (Marine Corps Integrated Maintenance Management System Field Procedures Manual), as applicable
- MCO P5090.2A (Marine Corps Environmental Compliance and Protection Manual)
- MCO P5100.8F (Marine Corps Occupational Safety and Health Program Manual)
- OPNAVINST 6250.4B (Operational Navy Instruction)
- IPMP (Integrated Pest Management Plan) for MCAS Yuma
- Storm water Pollution Prevention Plan (base-wide plan)

Pesticide/Herbicide Application– Inspection Checklist	
Date:	Time:
Installation:	Work Center:
Inspector's Name:	Signature:

Inspection Items	Yes	No	Comments
1. Are MSDSs current and available for inspection? (29 CFR 1910, MCO P5100.8F)			
2. Are required current training and certifications maintained for all personnel? (40 CFR 171, MCO P5090.2A)			
3. Are desktop procedures or turnover folder kept for this practice? (MCO P4790.2C)			
4. Is appropriate PPE worn as necessary? (29 CFR 1910, MCO P5100.8F)			
5. Is a fully-stocked spill kit and fire extinguisher kept in a designated location in vehicles? (29 CFR 1910, MCO P5100.8F)			
6. Are all non-original containers tagged and labeled with the same product information regarding chemical content, exposure routes, required PPE, use, application methods, storage, compatibility and disposal contained on the original product container label? (40 CFR 156, IPMP 6.1.2.3)			
7. Is proper equipment maintenance, including testing equipment before use, replacement of rubber and leather seals, and routine calibrations conducted to ensure proper application rates? (40 CFR 156, IPMP 4.1.6.1)			
8. Is caution used when spraying pesticides near areas that contain surface water or protected wildlife? (IPMP 7.4.6, 7.4.7)			
9. Are low toxicity, non-volatile, single application pesticides selected when available? (IPMP 6.2.2.2, OPNAVINST 6250.4B)			
10. To avoid drift, are the following precautions observed: <ul style="list-style-type: none"> a. Are spray additives used? b. Are larger or wide angle nozzles used? c. Is pressure in excess of 45 PSI avoided? d. Are lower boom heights used? e. Is spraying avoided when the wind is greater than 10 mph or blowing in the direction of sensitive areas? 			

Inspection Items	Yes	No	Comments
f. Are shielded spray booms used? (IPMP 6.2.2.2, OPNAVINST 6250.4B)			
12. Do personnel wash their hands, launder their clothing, and/or shower whenever the possibility of exposure exists? (29 CFR 1910, MCO P5100.8F)			
13. Is pesticide ever left in application equipment for more than a few hours? (40 CFR 156, IPMP 4.1.6.1)			
14. Are containers and secondary containment inspected daily to ensure they are free of leaks? Are daily inspections documented and maintained for examination for up to three years? (MCO P5090.2A)			
15. Are spills cleaned as soon as they are identified and reported to the supervisor and the Environmental Dept? Are spills recorded in a log book detailing the date, time, product spilled, quantity, location, cleanup actions taken, the name of the person reporting the spill and a report containing this information submitted to the Environmental Dept? (StaO6280.3G, MCO P5090.2A)			
16. Are daily records maintained that include chemical type, amounts, uses, dates, places of application, and applicator's names and certification? Are pest surveys and inspections also included? (IPMP, MCO P5090.2A)			
17. Are all pest management operations reported to NAVFACSW quarterly for specified uses of pesticides, including but not limited to: use of restricted use pesticides or application of pesticides in sensitive species areas? (IPMP MCO P5090.2A)			
16. Are warning signs such as "do not enter" and "chemical storage area" clearly visible and legible from a distance of 25 feet in any direction? (40 CFR 265)			

ADDITIONAL COMMENTS:

CORRECTIVE ACTION TAKEN:

Environmental Compliance Coordinator

Name: _____

Signature: _____

Date: _____