

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 Storage and Mixing

1.0 PURPOSE

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

2.0 APPLICATION

This guidance applies to those individuals who store and mix pesticides and herbicides.

3.0 PROCEDURE

3.1 Discussion:

Pesticides and herbicides are stored and mixed for the eventual application in designated areas to prevent pests, noxious weeds, and disease vectors. Pesticides and herbicides are hazardous materials that must be managed properly in order to avoid impacts to human health and the environment. Due to the toxicity of these chemicals, special precautions must be taken in order to avoid human exposure during mixing and storage. All hazardous materials must be stored in approved containers.

3.2 Operational Controls:

The following procedures apply:

1. Ensure that Material Safety Data Sheets (MSDSs) for all 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 pesticide label.
5. Maintain a fully-stocked spill kit and fire extinguishers nearby in designated locations.
6. Ensure that a water source and soap are available for hand-washing in the storage area.

7. Maintain storage room climate within parameters specified on the pesticide label.
8. Store incompatible chemicals on separate shelves. Sacks, cartons, and fiberboard boxes containing pesticides should be stored on wooden pallets or shelves that do not touch the floor.
9. Ensure that all non-original containers to which pesticides are transferred, or are mixed or stored in, are tagged and labeled with all of the same product information regarding chemical content, exposure routes, required PPE, application methods, storage, compatibility and disposal as contained on the original product container label.
10. Mix all pesticides, herbicides, etc. at the approved mixing station to minimize spill potential in other areas. Mix on location only if no mixing station is available.
11. Add spray additives that will increase the droplet sizes (within label guidelines) to decrease drift into adjacent areas.
12. Re-mix pesticide residues left in mixing or storage containers and reuse.
13. Inspect tanks and secondary containment, including shelf lips and concrete berms to ensure they are free of leaks. Maintain inspection records for three years (maintained at Naval Facilities Engineering Command South West (NAVFACSW)).
14. Ensure applicator trailers are parked on secondary containment platforms.
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. Ensure that warning signs such as “Do Not Enter” and “Chemical Storage Area” are clearly visible and legible from a distance of 25 feet in any direction.
17. Refer to the following ESOPs for additional information: Pesticide Herbicide General, Pesticide Herbicide Application, and Pesticide Herbicide Equipment Washing.
18. 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.
4. Hazardous materials inventory (must match Authorized Usage List).

5. Spill log book.
6. 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. DOD Pest Applicator training.
3. Pesticide Herbicide General ESOP.
4. Pesticide Herbicide Application 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 262 (Standards Applicable to Generators of Hazardous Waste)
- 40 CFR 265 (Interim Status Standard for Owners, of Hazardous Waste Treatment, Storage, and Disposal Facilities)
- Title 18 AAC (Arizona Administrative Code)
- 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)
- MCAS Yuma StaO 6280.3G Environmental Compliance and Protection Standard Operating Procedure.
- OPNAVINST 6250.4B (Operational Navy Instruction)
- IPMP (Integrated Pest Management Plan) for MCAS Yuma
- Storm water Pollution Prevention Plan (base-wide plan).

Pesticide/Herbicide Storage/Mixing– 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 training records and certifications current and available for inspection? (MCO P5090.2A)			
3. Are desktop procedures or a 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 and in vehicles? (40 CFR 262, 29 CFR 1910)			
6. Are a water source and soap available for hand washing in the storage area? (29 CFR 1910, MCO P5100.8F)			
7. Is the storage climate maintained within the parameters specified on the pesticide label? (IPMP 4.1.4, OPNAVINST 6250.4B)			
8. Are incompatible chemicals stored on separate shelves? Are sacks, cartons and fiberboard boxes stores on wooden pallets or shelves that do not touch the floor? (IPMP 4.1.4, OPNAVINST 6250.4B)			
9. Are all non-original containers to which pesticides are transferred, transported or applied in tagged and labeled with all of the same product information regarding chemical content, exposure routes, required PPE, application methods, storage, compatibility and disposal as contained on the original product container label? (IPMP 6.1.2.3)			
10. Are all pesticides/herbicides mixed at the approved mixing station to minimize spill potential in other areas? (IPMP 4.1.5, OPNAVINST 6250.4B)			
11. Are spray additives used which increase droplet sizes to decrease drift into adjacent areas? (IPMP 6.2.2.2, OPNAVINST 6250.4B)			
12. Are pesticide residues in mixing or storage containers			

Inspection Items	Yes	No	Comments
re-mixed and reused? (IPMP 4.1.5, OPNAVINST 6250.4B)			
13. Are tanks and secondary containment inspected, including shelf lips and concrete berms to ensure they are free of leaks? Are inspection records maintained for three years? (MCO P5090.2A)			
14. Are all applicator trailers parked on secondary containment platforms? (MCO P5090.2A, IPMP 6.1)			
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, and the name of the person reporting the spill? Is a report containing this information submitted to the Environmental Dept? (StaO6280.3G, 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: _____