

Environmental Standard Operating Procedure			
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Title: Aircraft/Helicopter Fueling/Defueling

1.0 PURPOSE

The purpose of this Environmental Standard Operating Procedure (ESOP) is to provide environmental guidelines for performing fueling and defueling operations on helicopters and fixed wing aircraft.

2.0 APPLICATION

This guidance applies to those individuals who perform fueling and defueling operations onboard Marine Corps Air Station (MCAS) Miramar.

3.0 REFERENCES

- 29 CFR 1910 (Code of Federal Regulations)
- 40 CFR 262
- NPDES General Permit CAs000001 Section A (10)(a)
- MCO P4790.2C
- MCO P5090.2A (USMC Environmental Compliance and Protection Manual)
- MCO P5100.8
- NAVAIR 4790 (Fueling and Refueling Operations)
- COMNAVAIRFORINST 4790 Command Naval Air Force Instruction
- Squadron Orders (aircraft specific)
- Station Order 6280.2
- Storm water Pollution Prevention Plan.
- Hazardous Waste Management Plan.

4.0 PROCEDURE

4.1 Discussion:

Fueling aircraft is performed at the flight line using fuel trucks, or at the fuel pits using stationary fuel pumps. The fuel trucks and stationary pumps are equipped with pressure refill nozzles, which hook directly into the aircraft.

Defueling stationary aircraft at a single point is performed to prevent leakage while the aircraft is on the ground, or to facilitate maintenance operations. Sampling is performed first using a "pencil drain" device to test the fuel

quality, in order to determine whether it is reusable or not. The fuel is normally collected and reused in aircraft, provided it passes quality testing. If the drained fuel fails quality testing, it is then designated as petroleum, oil, lubricants (POL) waste and handled accordingly. De-fueling trucks are then used to vacuum the bulk of the fuel out of the aircraft. The "pencil drain" device is then re-inserted in order to "gravity drain" the remaining fuel into a drum or container. When conducting sampling or gravity draining, secondary containment is required.

4.2 Operational Controls:

The following procedures apply:

1. Ensure that Material Safety Data Sheets (MSDSs) for aviation fuels (JP-5 and, if used, JP-8) are current and available for inspection.
2. Maintain a current operation manual for fueling and defueling each aircraft, in a designated location known to all personnel.
3. Maintain required current training and certifications for all personnel are current and available for inspection.
4. Ensure turnover folder information is kept for this practice and available for inspection.
5. Ensure that personal protective equipment (PPE) is used including: cranials, gloves, steel toed boots and coveralls while conducting fueling and defueling operations on the flight line or at the fuel pits.
6. Keep a fully stocked spill kit located near any potential hazardous areas and on push carts.
7. Keep fire extinguishers readily accessible and near potential hazardous areas and on push carts.
8. Ensure that secondary containment is used for draining fuel into a drum or when using the pencil drain device.
9. Conduct periodic maintenance on pumps, hoses and nozzles as recommended by the manufacturer.
10. Inspect all underground storage tanks (USTs) on a scheduled cycle.
11. Ensure that the fuel supply truck is grounded during refueling operations.
12. Ground containers, drums, and ASTs that contain ignitable waste in the Satellite Accumulation Area (SAA) are grounded during waste accumulation.
13. Properly label all containers completely and legibly with the following information: the words "Hazardous Waste", accumulation start date, and Environmental Protection Agency (EPA) hazardous waste (HW) number (e.g. D003).
14. Ensure containers and drums are not overfilled. Containers and drums are considered full when 3 to 4 inches of head space remains to allow for thermal expansion.
15. Keep containers closed except when waste is added or removed.

16. Update the hazardous waste log with the contents of drum, date of transfer and the container manifest number each time hazardous waste is transferred to the HAZMIN center.
17. Ensure that all spills are properly contained and cleaned up immediately.
18. Record all spills in a spill log book detailing the spill date, time, product spilled, quantity, location, cleanup actions taken and the name of the person reporting the spill and ensure that a spill report containing this information is submitted to the EMD.
19. Place all used rags in red foreign object debris (FOD) containers and turn in full containers at the HAZMIN center and obtain an empty container.
20. Ensure that signs reading "Flammable Materials, No Smoking", including a call list, what to do in case of a fire or other emergency, etc. are posted in the area in conspicuous locations.
21. If there are any specific situations or other concerns not addressed by this procedure, contact the MCAS Miramar Environmental Management Department (EMD) office.

4.3 Documentation and Record Keeping:

The following records must be maintained:

1. MSDSs for JP-5, and (if used) JP-8.
2. Training records and certifications for personnel.
3. Operation manuals for fueling/defueling each aircraft.
4. Authorized Usage List (AUL).
5. Hazardous materials inventory (must match AUL).
6. Maintenance log book
7. Inspection records.
8. Spill log book.
9. Fuel quantities/shipments.

4.4 Training:

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

1. Hazard Communication training.

2. Technician training (initial and annual).
3. Preventative maintenance (MRC).
4. Weekly on the job (OJT) training.
5. Aircraft specific SOP training.

4.5 Emergency Preparedness and Response Procedures:

Refer to Marine Corps Order (MCO) P5090.2A, Subject: Oil/Hazardous Substance Spills (OHSS) and Spill Prevention Containment & Countermeasures (SPCC) for MCAS Miramar;

Business Plan (Refer to Command Duty Officer (CDO) for fire incidents; and Contingency Plan,

Contact local Command (Command notifies EMD, EMD notifies Federal agencies).

4.6 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.

Aircraft/Helicopter Fueling/Defueling – Inspection Checklist	
Date:	Time:
Installation:	Work Center:
Inspector’s Name:	Signature:

Inspection Items	Yes	No	Comments
1. Are MSDSs for aviation fuels current and available for inspection? <i>(29 CFR 1910)</i>			
2. Is a current operation manual maintained in a designated location known to all shop personnel? <i>(MCO P5090.2A)</i>			
3. Are training records for all personnel current and available for inspection? <i>(MCO P5090.2A)</i>			
4. Is turnover folder information maintained for this practice <i>(MCO P4790.2C)</i>			
5. Is proper PPE worn when appropriate?			

<i>(29 CFR 1910)</i>			
6. Is a spill kit and fire extinguisher maintained nearby in a designated location known and on push carts? <i>(29 CFR 1910, MCO P5090.2A)</i>			
7. Is secondary containment used for draining fuel into a drum or when using the pencil drain device? <i>(40 CFR 262, MCO P5090.2A)</i>			
8. Is periodic maintenance performed on pumps, hoses and nozzles as recommended by the manufacturer? <i>(MCO P5090.2A)</i>			
9. Is all underground storage tanks (USTs) inspected on a scheduled cycle? <i>(40 CFR 262, MCO P5090.2A)</i>			
10. Is the fuel supply truck grounded during refueling operations? <i>(40 CFR 262, MCO P5090.2A)</i>			
11. Are containers that contain ignitable waste in the Satellite Accumulation Area (SAA) grounded during waste accumulation? <i>(29 CFR 1910, MCO P5090.2A)</i>			
12. Are containers labeled completely and legibly with the following information: the words "Hazardous Waste", accumulation start date, and EPA hazardous waste number (e.g. D003)? <i>(40 CFR 262, MCO P5090.2A)</i>			
13. Are containers and drums underfilled with 3 to 4 inches of head space to allow for thermal expansion? <i>(40 CFR 262, MCO P5090.2A)</i>			
14. Are containers kept closed except when waste is added or removed? <i>(40 CFR 262, MCO P5090.2A)</i>			
15. Is the hazardous waste log updated with the contents of containers, date of transfer, and the container manifest number upon transfer to the HAZMIN center? <i>(40 CFR 262, MCO P5090.2A)</i>			
16. Are all spills properly contained and cleaned up immediately? <i>(40 CFR 262, MCO P5090.2A)</i>			
17. Are all spills recorded in a spill log book detailing the spill date, time, product spilled, quantity, location, cleanup actions taken and the name of the person reporting the spill and is a spill report containing this information submitted to the EMD? <i>(40 CFR 262, MCO P5090.2A)</i>			
18. Are all used rags placed in red FOD containers and full containers turned in at the HAZMIN center? <i>(MCO P5090.2A)</i>			
19. Are signs posted in conspicuous locations? <i>(29 CFR 1910, MCO P5090.2A)</i>			

ADDITIONAL COMMENTS:

CORRECTIVE ACTION TAKEN:

Environmental Compliance Coordinator

Name: _____

Signature: _____

Date: _____