

Environmental Standard Operating Procedure			
Originating Office: MCAS Miramar Environmental Management Department	Revision: Original	Prepared By: Environmental Management Department	Approved By: William Moog
File Name: HAS-ESOP	Effective Date: 22 May 2007	Document Owner: EMD	

Title: Freon / Halon System Operations and Management

1.0 PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to provide environmental guidelines for the use of Freon and Halon systems operations and management (O&M).

2.0 APPLICATION

This guidance applies to those individuals who are work with Freon and Halon systems (O&M) aboard Marine Corps Air Station (MCAS) Miramar.

3.0 REFERENCES

- 22 CCR (California Code of Regulations)
- 40 CFR (Code of Federal Regulations)

4.0 PROCEDURE

4.1 Discussion:

Proper procedures must be followed when working with Freon and Halon. Freon and Halon are hazardous materials and may pose serious danger to human health and the environment if not handled and stored properly. Use and handling of these hazardous materials may expose personnel and the environment to gases that can cause serious damage. Hazards associated with Freon and Halon inhalation include chronic negative effects to the respiratory system and death.

When storing Freon, Halon and other hazardous materials, it is critical that each hazardous material be stored separately from other materials to avoid dangerous chemical reactions. Only store hazardous materials in separate, approved and appropriately labeled containers authorized for use aboard MCAS Miramar.

4.2 Operational Controls:

The following procedures apply for both Freon and Halon:

1. MSDSs must be readily available and current.
2. Identify, mark and store hazardous materials in approved containers authorized for use aboard MCAS Miramar.
3. Store containers separately and mark properly with the hazardous material they are intended to store.
4. Keep PPE (Personal Protective Equipment) and spill kits near potential spill hazard areas.
5. Keep fire extinguisher near potentially flammable materials.
6. Post appropriate signage such as "Inhalation Hazard" or, "Cryogenic Hazard" etc.
7. Inspect weekly as stated in references.
8. Turnover folder information must be maintained for this Standard Operating Procedure (SOP).

The following procedures apply to Freon **only**:

9. Only certified trained technicians and mechanics or supervised personnel may operate any equipment that recovers or restores Freon.
10. Only R-12 and R-134a Freon used in vehicle air-conditioners is permitted aboard MCAS Miramar.
11. Unused Freon must be stored according to manufactures and MSDS requirements.
12. Used Freon that is collected and stored for disposal or recycling must be stored in approved containers according to installation requirements.
13. Filters used in the recovery process to collect contaminated hydro-carbons must be collected and stored and disposed of properly.
14. Identify, mark and store Freon only in approved containers authorized for use aboard MCAS Miramar.

The following procedures apply to Halon **only**:

15. Only trained mechanics or supervised personnel may operate any equipment that recovers or restores Halon.
16. Halon must be stored according to manufactures and MSDS requirements.
17. Identify, mark and store Halon only in approved containers authorized for use aboard MCAS Miramar.
18. Halon that is collected for disposal must be stored and ready for shipment back to NAVAL Reserve Base.

4.3 Documentation and Record Keeping:

The following records must be maintained:

1. MSDSs for Hazardous Material being stored.
2. Inspection and training records.
3. Certified personnel for Freon in Section 608/909.

4.4 Training:

All affected personnel must be trained in this Standard Operating Procedure and the following:

1. Hazard Communication training.
2. General Environmental Awareness training.

4.5 Emergency Response Procedures:

Call 9-1-1.

4.6 Inspection and Corrective Action:

The Environmental Compliance Coordinator (ECC) shall 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.

Freon/ Halon System Operations and Management – Inspection Checklist	
Date:	Time:
Installation:	Work Center:
Inspector's Name:	Signature:

Inspection Items	Yes	No	Comments
1. Are all MSDSs for hazardous materials being recovered or replaced readily available and current? (29 CFR 1910; CCO 5090.5)			
2. Is operation of equipment that recovers or restores Freon or Halon restricted to certified and trained technicians, mechanics, or supervised personnel?			

	<i>(40 CFR 82; 29 CFR 1910; CCO 5090.5)</i>			
3.	Are only R-12 and R-134a Freon being used in vehicle air-conditioners as permitted aboard MCAS Miramar? <i>(40 CFR 82; CCO 5090.5)</i>			
4.	Are unused and used Freon and Halon collected and stored for disposal according to installation requirements? <i>(40 CFR 82; CCO 5090.5)</i>			
5.	Are contaminated filters produced in the recovery process collected, stored and disposed of properly? <i>(40 CFR 82; CCO 5090.5)</i>			
6.	Are Freon and Halon being stored according to manufactures and MSDS Requirements? <i>(40 CFR 82; 29 CFR 1910; CCO 5090.5)</i>			
7.	When recovering or replacing Freon, are proper procedures for recovery and/or replacement of refrigerant being followed? <i>(40 CFR 82; CCO 5090.5)</i>			
8.	Is testing being done on used Freon to see if it is contaminated or suitable for recycling after it is collected? <i>(40 CFR 82; CCO 5090.5)</i>			
9.	Are compressors being drained and disposed of as scrap metal? <i>(40 CFR; CCO 5090.5)</i>			
10.	Is compressor oil being collected and disposed of properly? <i>(40 CFR; CCO 5090.5)</i>			
11.	Are refrigerant leaks being handled via emergency response procedures according to the installation ICOP? <i>(40 CFR; CCO 5090.5)</i>			
12.	Are spill kits kept near potential spill hazardous areas? <i>(29 CFR 1910; CCO 5090.5)</i>			
13.	Are fire extinguishers kept near potential flammable material? <i>(29 CFR 1910; CCO 5090.5)</i>			
14.	Is PPE kept near potential health hazard areas? <i>(29 CFR 1910; CCO 5090.5)</i>			
15.	Is proper signage posted such as "No Smoking"? <i>(29 CFR 1910; CCO 5090.5)</i>			
16.	Are training and inspection records maintained and available for inspection? <i>(MCO P5090.2A 9104.1(k)(5)- inspection only)</i>			

ADDITIONAL COMMENTS:

CORRECTIVE ACTION TAKEN:

Environmental Compliance Coordinator

Name: _____

Signature: _____

Date: _____