Environmental Standard Operating Procedure

Originating Office: **Natural Resources and Environmental Affairs Office**	Revised: 30 December 2015 Supersedes 30 April 2013	Prepared By: NREA Subject Matter Expert (SME)	Approved By: Air Resources Manager VALLS.JOE.E.1231730601 Digitally signed by VALLS.JOE.E.1231730601 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USMC, cn=VALLS.JOE.E.1231730601 Date: 2016.05.04 12:23:04 -07'00'
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Title: Refrigerant and Halon Operations and Management

1.0 PURPOSE

The purpose of this Environmental Standard Operating Procedure (SOP) is to provide environmental guidelines for the use of refrigerants and halon systems operations and management (O&M) aboard the Marine Air Ground Task Force Command, Marine Corps Air Ground Combat Center (MAGTFTC, MCAGCC).

2.0 APPLICATION

This guidance applies to those individuals who work with refrigerants systems (O&M) aboard MAGTFTC, MCAGCC.

3.0 REFERENCES

- Code of Federal Regulations – Title 40, (40 CFR)
- Clean Air Act (CAA), Title VI, Section 604, 605, 608 and 609
- 17 CCR (California Code of Regulations) Division 3, Chapter 1, Subchapter 10, Article 4, § 95380 to 95398
- National Institute of Standards and Technology Chemistry WebBook
- Hazardous Waste Operations Manual, MCAGCC
- Combat Center Order 5090.5C, Integrated Contingency and Operations Plans (ICOP) for MCAGCC
- CCO 5090.1F
- MCAGCC Refrigerant Management Plan and Inventory

4.0 PROCEDURE

4.1 Discussion:
Refrigerants and Halon are regulated as hazardous materials by the United States Environmental Protection Agency (USEPA) and California Air Resources Board (ARB) because they have a powerful greenhouse gas effect and deplete the atmospheric ozone layer when released. This ESOP identifies management, inspections, tracking, and reporting measures that must be implemented by personnel aboard the base to restrict release of refrigerants identified as ozone-depleting substances (ODS). ODSs include chlorofluorocarbons (CFCs), hydro chlorofluorocarbons (HCFCs), and hydro fluorocarbons (HFCs).

MAGTFTC, MCAGCC uses thousands of heating, ventilation, air-conditioning, and refrigeration (HVAC&R) systems to support its mission of national defense. Typical uses include: comfort cooling, refrigeration, freezers, ice machines, drinking fountains, beverage dispensers, and chillers. The owners and operators of HVAC&R equipment are units and tenant commands, such as Defense Commissary Agency (DeCA), Naval Hospital, and Marine Corps Community Services (MCCS). HVAC&R units are typically serviced by organizations such as the Public Works Facilities Maintenance Department, MCCS, or third-party contractors. MAGTFTC, MCAGCC has been subject to federal requirements for the management of its refrigerants since the Clean Air Act amendments of 1990. In 2009, California approved its own refrigerant rule, which is substantially different from the federal requirements.

On January 1, 2011, a new California regulation to minimize leaks of environmentally harmful refrigerants took effect. The regulation, known as the Refrigerant Management Program, applies to the larger industrial and commercial systems that use high global warming potential refrigerants – those typically used in cold food storage, chiller plants, air conditioning units and walk-in refer storage facilities. Leaking refrigeration systems are California's single largest source of high-Global Warming Potential gases. Refrigerant compounds such as CFCs, HCFCs and HFCs are hundreds to thousands of times more efficient at trapping the earth's heat than carbon dioxide. Fixing refrigerant leaks is one of the most cost-effective ways to reduce air pollution.

4.2 Refrigerant Management and Operations:

1. Refrigerant Management Tool (RMT):
   - A central computerized database called the Refrigerant Management Tool (RMT) database is used to track refrigerant information, including system maintenance, inspections, leak testing and disposal. All commands managing HVAC&R systems must use the RMT to manage their program.
   - RMT has capacity to manage document and record control for the program: Federal law requires specific information related to refrigerant use to be documented and retained for a minimum of 3 years. Purchase records of refrigerants used in systems with over 50 pound charge must be retained for 5 years.
   - For questions about the RMT database or to set up an account for a new employee to use the program, contact the Air Resources Manager, Natural Resources Environmental Affairs, (760)830-8480.
     RMT link: https://www.rtpdev.info/Refrigeration/

2. Inspection and Leak Testing Requirements:
   - Large Systems (equal or greater than 2,000 pounds full charge)
     - Must have automatic leak detection system
     - Annual inspection and calibration
   - Medium Systems (equal or greater than 200 pounds, but less than 2,000 pounds full charge)
     - Inspection and leak detection every three months
     - If system has an automatic leak detection system, inspection and calibration annually
   - Small Systems (equal or greater than 50 pounds, but less than 200 pounds full charge)

- Annual inspections and leak detection

3. EPA-approved 608 and 609 certification is required for any person who may perform service, maintenance, repair, or recovery work on refrigerant-containing equipment. Technicians and contractor technicians may service only equipment for which they are certified.

4. Refrigeration systems that have a refrigerant capacity of more than 50 pounds must have leaks fixed within 14 days of detection. If the leak cannot be fixed within 14 days of detection, contact the Air Resources Manager, Natural Resources Environmental Affairs, (760)830-8480.

5. MSDS/SDS must be readily available and current.

6. Identify, mark and store refrigerants in approved containers authorized for use aboard MCAGCC. Store and label containers upright and secured.

7. Recovered refrigerants, such as R-11, R-12, and R-22, shall be managed through the NREA Hazardous Waste Program. No sales or contractual exchanges are allowed.

8. Filters used in the recovery process to collect contaminated hydro-carbons must be collected and stored and disposed of through the NREA Hazardous Waste Program.

9. Keep personal protective equipment (PPE) and spill kits near potential spill hazard areas.

10. Keep fire extinguisher near potentially flammable materials.

11. Post signage such as "Inhalation Hazard" near storage sites.

12. Inspect storage sites weekly.

13. The Refrigerant Management Plan, including this Environmental Standard Operating Procedure (ESOP), must be maintained and available to all refrigerant technicians.

14. If there are any specific situations or other concerns not addressed by this procedure, contact the Air Resources Manager, Natural Resources Environmental Affairs, (760)830-7695.

4.3 Training:

All affected personnel must have the following certifications and training:

1. CAA Section 608 and 609 Certification.
2. HAZWOPER Training.
3. Hazard Communication Training/Globally Harmonized System.

4.4 Emergency Preparedness and Response Procedures:

Refer to Combat Center Order (CCO) 5090.5C, Subject: Integrated Contingency and Operations Plans (ICOP) for Marine Corps Air Ground Combat Center.

4.5 Inspection and Corrective Action:
The NREA Compliance Inspector and command Environmental Compliance Coordinator (ECC) shall designate personnel to perform inspections. The Inspector and 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 medium systems being inspected/leak tested quarterly and documented in the RMT?			
2. Are all small systems being inspected/leak tested annually and documented in the RMT?			
3. Are there any systems with a refrigerant full charge of 50 pounds or greater not in the inventory or documented in the RMT?			
4. Are refrigerant purchases, system inspections and maintenance records available for the last 5 CYs?			
5. Are all refrigerant MSDS/SDS readily available and current?			
6. Is refrigerant systems operation and maintenance restricted to certified and trained technicians, mechanics, or supervised personnel? • Verify all technicians have 608/609 Certifications			
7. Are unused and used refrigerant collected and stored for disposal according to installation requirements? - Containers are labeled correctly - Containers are secured tightly and upright			
8. Are contaminated filters produced in the recovery process collected, stored and disposed of properly? - Follow Hazwaste labeling and storage			
9. Are proper procedures for recovery and/or replacement of refrigerant being followed?			
10. Are all inspections, leak tests and system maintenance being logged in the RMT?			
11. Is compressor oil being collected and disposed of as HazWaste?			
12. Are refrigerant leaks being handled via emergency response procedures according to the installation ICOP? - Were there any leaks beyond 14 days?			
13. Are spill kits kept near potential spill hazardous areas?			

Inspection Items	Yes	No	Comments
14. Are fire extinguishers kept near potential flammable material?			
15. Is PPE kept near potential health hazard areas?			
16. Is proper signage posted such as "No Smoking" and "Inhalation Hazard"?			

ADDITIONAL COMMENTS:

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CORRECTIVE ACTION TAKEN:

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_____

Environmental Compliance Coordinator
Name: _____
Signature: _____
Date: _____