

Environmental Standard Operating Procedure			
Originating Office: MCAS Miramar Environmental Management Department	Revision: Original	Prepared By: Environmental Management Department	Approved By: William Moog
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Title: Swimming Pool Chlorination Operations

1.0 PURPOSE

The purpose of this Environmental Standard Operating Procedure (ESOP) is to provide environmental guidelines for performing swimming pool chlorination.

2.0 APPLICATION

This guidance applies to those individuals who perform swimming pool chlorination operations onboard Marine Corps Air Station (MCAS) Miramar.

3.0 REFERENCES

- 40 CFR 262 (Code of Federal Regulations)
- 29 CFR 1910
- 22 CCR (California Code of Regulations)
- MCO P4790.2C (Marine Corps Order)
- MCO P5090.2A (USMC Environmental Compliance and Protection Manual)
- Independent Pool & Spa Service Association (IPSSA) Standing Rules
- Association of Pool & Spa Professionals (APSP) Standard Operating Procedures

4.0 PROCEDURE

4.1 Discussion:

Swimming pool operations require maintaining the optimal chlorine and pH levels in pool water. The chlorination process involves the use of Eromatic Chlorine Generators that perform electrolysis on salt added to the water producing chlorine gas, sodium hydroxide, and hydrogen gas. During the chlorine production, the sodium hydroxide dissolves into the water and the hydrogen gas escapes into the atmosphere. Proper pool maintenance also requires the use of muriatic acid and other potentially hazardous materials that must be managed properly to minimize impacts to human health and the environment. All hazardous materials must be stored in approved containers. This process does not produce hazardous waste as chlorinated water is discharged to the sewer system.

Units are equipped with approved containers as necessary. Units should contact the Environmental Management Department (EMD) for replacement of or to request additional containers.

4.2 Operational Controls:

The following procedures apply:

1. Ensure that Material Safety Data Sheets (MSDS) for Chlorine, muriatic acid and all other materials associated with this practice are available and current for inspection.
2. Ensure that all required permits are current and available for inspection (e.g., pool operator certification, county/city license).
3. Ensure operation manuals for chlorination equipment is available and is in a designated location known to all personnel.
4. Ensure personnel maintain required current training records and certifications.
5. Ensure turnover folder information is kept for this practice.
6. Wear appropriate personal protective equipment (PPE) including gloves and respirators as needed.
7. Conduct and document weekly inspections of tanks, secondary containment and drainage valves to ensure they are free of leaks and in the fully closed position.
8. Note any abnormal conditions found during weekly inspections and their corrective actions by recording them in a logbook.
9. Conduct and document periodic maintenance of equipment as recommended by manufacturer.
10. Prepare and submit the bacterial report to the medical department and the monthly report to base facilities.
11. Properly clean up all spills as soon as they are identified and report the spill to the supervisor and EMD.
12. 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.
13. Ensure that warning signs reading "Emergency Shutoff" and "Slippery When Wet" are clearly visible and legible from a distance of 25 feet in any direction.
14. If there are any specific situations or other concerns not addressed by this procedure, contact the EMD.

4.3 Documentation and Record Keeping:

The following records must be maintained:

1. MSDSs for all materials associated with this practice.
2. Operation manuals.
3. Hazardous materials inventory (must match Authorized Usage List).
4. Scheduled maintenance logs.
5. Required permits/licenses.
6. Inspection records.
7. Reports (bacterial reports to medical department and base).

4.4 Training:

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

1. Hazard Communication (HazCom) training.
2. Certified Pool Operator training.
3. Preventative Maintenance (MRC).
4. On-the-job 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.

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.

Date:	Time:
Installation:	Work Center:
Inspector's Name:	Signature:

Inspection Items	Yes	No	Comments
1. Are MSDSs for all materials associated with this practice current and available for inspection? <i>(29 CFR 1910)</i>			
2. Are required permits current and available? <i>(MCO P5090.2A, IPSSA, APSP SOP)</i>			
3. Is an operation manual for chlorination equipment available and in a designated location? <i>(MCO P5090.2A)</i>			
4. Are required current training records and certifications maintained? <i>(MCO P5090.2A, IPSSA, APSP SOP)</i>			
5. Is appropriate PPE worn when needed? <i>(29 CFR 1910)</i>			
6. Are weekly inspections of tanks, secondary containment and drainage valves conducted to ensure they are free of leaks and maintained in the fully closed position? <i>(40 CFR 262, MCO P5090.2A)</i>			
7. Are abnormal conditions found during weekly inspections documented, along with their corrective actions, by recording them in a logbook? <i>(MCO P5090.2A, IPSSA, APSP SOP)</i>			
8. Is periodic maintenance conducted and documented as recommended by manufacturer? <i>(MCO P5090.2A, IPSSA, APSP SOP)</i>			
9. Is a bacterial report submitted to the medical department and in the monthly report? <i>(40 CFR 262, MCO P5090.2A)</i>			
10. Are spills cleaned as soon as identified and reported to the supervisor and EMD? <i>(40 CFR 262, MCO P5090.2A)</i>			
11. Is a record of all spills kept in a log book detailing spill date, time, product spilled, quantity, location, clean up actions, and name of person reporting the spill, and is all information incorporated into a report submitted to EMD? <i>(40 CFR 262, MCO P5090.2A)</i>			
12. Are warning signs reading "Emergency Shutoff" and "Slippery When Wet" clearly visible and legible from a distance of 25 feet in any direction?			

(29 CFR 1910, 22 CCR 66265, MCO P5090.2A)

ADDITIONAL COMMENTS:

CORRECTIVE ACTION TAKEN:

Environmental Compliance Coordinator

Name: _____

Signature: _____

Date: _____