

Environmental Standard Operating Procedure			
Originating Office:  <b>MCAS Miramar</b>  <b>Environmental Management Department</b>	Revision:  Original	Prepared By:  Environmental Management Department	Approved By:  William Moog
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## Title: Open Burning/Open Detonation

### 1.0 PURPOSE

The purpose of this Environmental Standard Operating Procedure (ESOP) is to provide environmental guidelines for the open burning and open detonation (OB/OD) of explosives.

### 2.0 APPLICATION

This guidance applies to those individuals who are involved in the burning and detonation of explosives aboard Marine Corps Air Station (MCAS) Miramar.

### 3.0 REFERENCES

- 40 CFR 270.4
- 40 CFR 260.10 (Code of Federal Regulations)
- A.A.C. R18-8-264.A, 40 CFR 264.16 (d), (e) and (m)
- 29 CFR 1910.120 (e)
- 40 CFR 264.56 (k)
- 40 CFR 264.15 (d) and (j)
- 40 CFR 264.77
- 40 CFR 264.73
- Navy's Shipping Inspector's Manual for Ammunition, Explosives, and Related Hazardous Materials
- MCO P5090.2A (USMC Environmental Compliance and Protection Manual)

### 4.0 PROCEDURE

#### 3.1 Discussion:

The Open Burn (OB) Permit is issued to MCAS Miramar in order to control the detonation of munitions that are unserviceable, out-dated, or obsolete munitions. MCAS Miramar is allowed to receive, store, and thermally treat munitions. The explosive ordnance is categorized as hazardous waste (HW) and therefore must be managed properly in order to lessen impacts to human health and the environment.

The OD areas are known as "pits" or "shotholes". The pits are created by the detonation of ordnance and enlarge with subsequent detonations enlarge the pit radius and depth. The pits are inspected after each detonation, weekly, and after storm events or high winds for integrity, depth, and metal fragments. If an inspection determines a detonation pit is unusable, the pit is backfilled and a new detonation pit is developed. The depth and location of each pit is recorded prior to backfilling.

### **3.2 Operational Controls:**

The following procedures apply:

1. Maintain a copy nomenclature of military munitions (no MSDS's are issued).
2. Ensure that training requirements are met and that training certifications for all personnel are maintained.
3. All personnel must wear appropriate Protective Personal Equipment (PPE) including; eye protection, ear protection, respirators, chemical-resistant clothing, gloves, and steel-toed boots.
4. Ensure a copy of the OB Permit is onsite (in vehicle) during all burning operations.
5. Ensure all personnel are trained that smoking is prohibited on the Military Training Range (MTR).
6. Use only non-sparking tools on the MTR.
7. Inspect all safety devices i.e. communication equipment, spill kit, first aid kit, and fire extinguishers before and after each operation.
8. Inspect vehicles used to transport demolition materials, explosives, and personnel before and after each operation.
9. Inspect the condition of all security devices i.e. warning signs, boundary fences, and gates weekly.
10. Inspect the MTR e.g. condition of access and periphery roads monthly.
11. Initiate immediate action for non-emergency maintenance at the MTR if inspections reveal maintenance is needed.
12. File all completed inspection checklists in the operations and inspection log (Explosive Ordnance Disposal (EOD) building).
13. Conduct operations during daylight hours only.
14. Ensure operations are not conducted during the threat of electrical or thunderstorms.
15. Ensure that no personnel are present on the MTR when the detonation takes place.
16. Ensure that no unauthorized personnel have trespassed within the MTR boundaries.

17. Package reactive wastes securely, segregate incompatible items, secure on vehicles and transport according to Department of Transportation (DOT) regulations. Incompatible wastes must not be mixed and may not be transported to or disposed of in the MTR.
18. Report vehicle breakdowns that occur during operations to the officer in charge.
19. Ensure OD operations are conducted accordingly.
20. Inspect immediate area around the detonation after each detonation. All detonation debris (metal casings, and kick outs) will be collected from the ground and processed accordingly.
21. Backfill the pit after it becomes too deep (e.g. if it unsafe to roll a bomb into, or if it is 10 feet or deeper), document depth and location of pit then develop a new pit.
22. Record the date and time of each OB/OD, the purpose of each action, and the specific types and quantity of items ignited.

### **3.3 Documentation and Record Keeping:**

The following records must be maintained:

1. MSDSs for all non munitions received on site.
2. Operations and inspection log.
3. MTR Inspection Checklist.
  - a. Before and after each use
    - i. Communication, safety, and emergency equipment
    - ii. Vehicles
  - b. Weekly
    - i. Security devices, including fences, signs, and gates
  - c. Monthly
    - i. Range areas, including main and perimeter roads, gate area, flag poles, and periphery
4. Waste Management Performance Report.
  - a. Name, location, and North American Industry Classification System (NAICS) code of facility
  - b. Estimate of quantity of waste managed by the Permittee

- c. Summary
  - d. Certification of the report and summary by a professional engineer
5. Inspection Schedules.
  6. Personnel training documents and certifications.
  7. Emergency Contingency Plan.
  8. Operating Record.
    - a. Description and quantity of HW received and method and date of treatment, storage, or disposal
    - b. Location of each HW at facility, quantity at each location, and cross references to manifest documents
    - c. Records and results of waste analysis
    - d. Summary reports and details of all incidents
    - e. Records and results of inspections
    - f. Monitoring, testing, or analytical data and corrective actions
    - g. Waste minimization documents
  9. Closure Plan.

### **3.4 Training:**

All applicable personnel must be trained in this ESOP and the following:

1. Hazardous Waste Operations and Emergency Response (HazWOPER) Training (initial and annual).
2. Hazardous Waste Management Training.
3. Hazardous Waste Supervisor.
4. Trenching and Excavations Training.
5. Explosive Ordnance Training.

### **3.5 Emergency Preparedness and Response Procedures:**

Refer to 40 CFR 264.32, 264.56 (b) (c) (d) for required equipment and in case there is a fire, explosion, or release of HW.

**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.

Open Burning/Open Detonation – Inspection Checklist	
Date:	Time:
Installation:	Work Center:
Inspector’s Name:	Signature:

Inspection Items	Yes	No	Comments
1. Are all MSDSs readily available and current? <i>(29 CFR 1910; MCO P5090.2A)</i>			
2. Are all training requirements met and are training certifications maintained and available for review? <i>(MCO P5090.2A)</i>			
3. Do all personnel wear the appropriate PPE? <i>(29 CFR 1910)</i>			
4. Are all personnel informed that smoking is prohibited? <i>(PTO Pt III.F)</i>			
5. Are only non-sparking tools used on the MTR? <i>(PTO Pt III.F)</i>			
6. Are all safety devices inspected before and after each use? <i>(PTO Pt III.E)</i>			
7. Are all vehicles inspected before and after each use? <i>(PTO Pt III.E)</i>			
8. Are all security devices inspected weekly? <i>(PTO Pt III.E)</i>			
9. Is the MTR inspected monthly? <i>(PTO Pt III.E)</i>			
10. Are non-emergency maintenance needs initiated immediately? <i>(PTO Pt III.E)</i>			
11. Are all inspection checklists filed in the operations			

and inspection log? (PTO Pt III.E)			
12. Is a copy of the OD permit in the vehicle? (PTO, A.A.C. R18-2-602 D.3.(d)(i))			
13. Are operations conducted during daylight hours only? (PTO Pt III.C.6)			
14. Are operations postponed if a threat of electrical or thunderstorms are present? (PTO Pt. III.C.3)			
15. Is the MTR made clear of all personnel before a detonation? (PTO Pt III.C.7)			
16. Is the MTR checked for any unauthorized personnel? (PTO Pt III.E.1)			
17. Are reactive wastes properly packed and transported? (PTO Pt III.F)			
18. Are vehicle breakdowns during an operation reported to appropriate personnel? (PTO Pt III.F)			
19. Are OD operations performed in accordance to the OB Permit and applicable Department of Defense (DOD), NAVSEA, and MCAS rules? (PTO Pt III.D)			
20. Is the detonation area inspected after an operation? (PTO Pt III.C.1)			
21. Are all materials sent for recycling free of hazardous wastes? (PTO Pt III.C.5)			
22. Are the date, time, purpose, and items and quantity of items ignited recorded? (PTO Pt II.J)			
23. Is the pit backfilled and recorded after it becomes too deep and before a new pit developed? (PTO Pt III.C.2,			

**ADDITIONAL COMMENTS:**

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**CORRECTIVE ACTION TAKEN:**

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**Environmental Compliance Coordinator**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_