

Environmental Standard Operating Procedure			
Originating Office: <b>MCAS Miramar Environmental Management Department</b>	Revision:  Original	Prepared By:  Environmental Management Department	Approved By:  William Moog
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## Title: Portable Engine/Generator Operation and Maintenance

### 1.0 PURPOSE

The purpose of this Environmental Standard Operating Procedure (ESOP) is to provide environmental guidelines for operation and maintenance (O & M) of portable engines/generators onboard Marine Corps Air Station (MCAS) Miramar.

### 2.0 APPLICATION

This guidance applies to those individuals who operate and maintain gensets.

### 3.0 REFERENCES

- 29 CFR 1910 (Code of Federal Regulations)
- 40 CFR
- Clean Air Act of 1990 (EPA)
- Hazardous Air Pollution Standards (HAPS)
- MCO P5090.2A

### 4.0 PROCEDURE

#### 4.1 Discussion:

During daily operations portable generators are sometimes used as a source of remote power in the field or on the flight line, or to provide a backup source of power in case of a power outage. Operations of portable generators and engines require the use of hazardous materials (HM) such as oil, antifreeze, fuel, lubricants and batteries. These materials must be managed properly to lessen impacts to human health and the environment. The operations and maintenance of generators/engines also generates hazardous wastes (HW) such as used oil and antifreeze.

#### 4.2 Operational Controls:

The following procedures apply:

1. Ensure that Material Safety Data Sheets (MSDS) for all materials involved in this process are readily available and current including, but not limited to, fuels, oils, antifreeze, sulfuric acid, and lead.
2. Ensure that training requirements are met and that training certifications for all personnel are maintained.
3. Ensure that Personal Protective Equipment (PPE) is used including: gloves, ear and eye protection, cranials (may be necessary when conducting generator/engine O & M on the flight line), chemical resistant clothing and steel-toed boots.
4. Maintain a fully stocked spill kit nearby in a designated location known to all unit personnel.
5. Ensure that fire extinguishers are kept nearby in know locations.
6. Ensure that the fuel used in gensets is within the sulfur limit specified by the PTOs. This is performed by an outside fuel vendor, and the analytical results are furnished to MCAS Miramar Environmental Management Department with every fuel delivery.
7. Ensure that generators/engines that are not used on the flight line are run for no more than 500 hours per year, and that generators/engines that are used on the flight line are run for no more than 1,000 hours per year. This instruction applies only to those generators/engines that are regulated by a PTO.
8. Ensure that appropriate warning and caution labels are posted on generators/engines.
9. Check all fluids prior to each use.
10. Conduct periodic maintenance as recommended by the manufacturer.
11. Ensure that all maintenance and inspection records are current and available for review.
12. Report engine hours (run time), make, model and serial number monthly to EMD.
13. Store all usable hazardous materials (e.g., oil, grease, and paint) in the hazardous materials (HAZMAT) locker.
14. Collect and store all HW in appropriate, approved containers authorized for use intended. Use only transfer containers equipped with lids. Check containers for deterioration and structural integrity.
15. Properly label all containers completely and legibly with the following information: label with the words "Hazardous Waste" on outside of container, accumulation start date, and Environmental Protection Agency (EPA) HW number (e.g. D003).
16. Ensure used fluids are not cross-contaminated with any other fluids or materials (e.g., keep POL separated from antifreeze).
17. Keep containers closed except when HW is being added or removed.
18. Ensure containers and/or drums are not overfilled. Containers are considered full when 3 to 4 inches of head space remain to allow for thermal expansion.

19. Maintain a HW Log, which includes container type, accumulation start date, accumulation end date, date container taken to Hw Satellite Accumulation Area, HW Manifest number.
20. Contact the Hazardous Waste Minimization (HAZMIN) Center when drums and/or ASTs are full, for transfer to the HW Satellite Accumulation Area.
21. Clean up all spills immediately, using approved procedures and disposal methods according to the type of material spilled.
22. Place used rags in approved containers for recycling. Turn in full used rag containers at the HAZMIN Center and obtain an empty container and clean rags.
23. Ensure that spills are 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.
24. Report all spills immediately to supervisor.
25. If there are any specific situations or other concerns not addressed by this procedure, contact EMD at (858) 577-1108.

#### **4.3 Documentation and Record Keeping:**

The following records must be maintained:

1. MSDSs for all materials involved in this operation.
2. Training records and certifications for all personnel.
3. Equipment log book (date/hours run, fuels certification, malfunctions, opacity, liquid releases).
4. Spill log.
5. Inspection records.

#### **4.4 Training:**

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

1. Hazard Communication Training.
2. General Environmental Awareness Training.
3. Initial on the job (OJT) 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.

Portable/Generator Operation and Maintenance – Inspection Checklist	
Date:	Time:
Installation:	Work Center:
Inspector’s Name:	Signature:

Inspection Items	Yes	No	Comments
1. Are MSDSs for fuel, oil and antifreeze current and any other materials involved in this process available for inspection? <i>(29 CFR 1910, 40 CFR, MCO P5090.2A)</i>			
2. Are personnel training records and certificates maintained and available for inspection? <i>[MCO P5090.2A 9104.1(k)(5)- inspection only]</i>			
3. Is proper PPE (i.e., eye protection, hearing protection, steel-toed shoes, etc.) worn while performing O & M on the generators/engines? <i>(29 CFR 1910)</i>			
4. Is a fully stocked spill kit kept nearby in a designated location known to all unit personnel? <i>(29 CFR 1910, 40 CFR, MCO P5090.2A)</i>			
5. Is a fire extinguisher kept nearby in a known location? <i>(29 CFR 1910, 40 CFR, MCO P5090.2A)</i>			
6. Are only approved low sulfur fuels used?			

<p>7. For generators/engines that require a PTO:</p> <p>a. Are generators/engines, which are not used on the flight line, run for no more than 500 hours per year?</p> <p>b. Are generators/engines, which are used on the flight line, run for no more than 1,000 hours per year?</p>			
<p>8. Is appropriate warning/caution labels posted on the generators/engines? <i>(29 CFR 1910, 40 CFR, MCO P5090.2A)</i></p>			
<p>9. Is periodic maintenance conducted as recommended by manufacturer? <i>MCO P5090.2A</i></p>			
<p>10. Store all usable hazardous materials (oil, grease, paint) in the hazardous materials (HAZMAT) locker. <i>(40 CFR 262)</i></p>			
<p>11. Are only compatible HW containers used? With Lids? Structural integrity checked? <i>(40 CFR 262)</i></p>			
<p>12. Are all containers properly labeled with words “Hazardous Waste”, accumulation start date, and EPA HW number? <i>[40 CFR 262.34 (a)(3), (c)(1)(ii)]</i></p>			
<p>13. Are all containers free from cross-contamination? If not, are cross-contaminated wastes stored separately? <i>(40 CFR 262)</i></p>			
<p>14. Is storage containers kept closed except when waste is being added or removed? <i>(40 CFR 262)</i></p>			
<p>15. Is an under fill of 3”- 4” left in drums to allow for liquid expansion? <i>(40 CFR 262)</i></p>			
<p>16. Is the HW Log maintained with type of containers, accumulation start date, accumulation end date, date container taken to Satellite Accumulation Area, and HW manifest number? <i>[Subtitle C (40 CFR Part 262)]</i></p>			
<p>17. Is the HAZMIN Center contacted when drums (or ASTs) are full, for transfer to their facility? <i>(MCO 5090.2A)</i></p>			
<p>18. Are spills properly cleaned up as soon as they are identified and reported to shop supervisor? <i>(40 CFR, 29 CFR, MCO P5090.2A)</i></p>			

19. Are used rags placed in an approved container for recycling? (MCO P5090.2A)			
20. Are spills recorded in a spill log book with the spill date, time, product spilled, quantity, location, cleanup actions taken and the name of the person reporting the spill? [CCR 66265.56(j), HWMP Sec: 4.2]			
21. Are spills reported immediately to supervisor? (MCO P5090.2A, 29 CFR 1910, 40 CFR)			

**ADDITIONAL COMMENTS:**

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**CORRECTIVE ACTION TAKEN:**

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**Environmental Compliance Coordinator**

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

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

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

