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|--|---------------------------|---|----------------------------------|
| Environmental Standard Operating Procedure   |                           |   |                                  |
| Originating Office:<br><br><b>MCAS Miramar<br/>Environmental<br/>Management<br/>Department</b> | Revision:<br><br>Original | Prepared By:<br><br>Environmental<br>Management<br>Department | Approved By:<br><br>William Moog |
| File Name: FUD-ESOP  | Effective Date: 06 Aug 07 | Document Owner: EMD   |                                  |

## Title: Fuel Drain

### 1.0 PURPOSE

The purpose of this Environmental Standard Operating Procedure (ESOP) is to provide environmental guidelines for personnel conducting aviation fuel drain operations onboard Marine Corps Air Station (MCAS) Miramar.

### 2.0 APPLICATION

This guidance applies to those individuals who perform aviation fuel draining operations.

### 3.0 REFERENCES

- 29 CFR (Code of Federal Regulations)
- 40 CFR
- RCRA (Resource Conservation and Recovery Act) Part B
- AAC 18 (Arizona Administrative Code)
- MCO P5090.2A (USMC Environmental Compliance and Protection Manual)
- COMNAVAIRFORINST Operational Instruction
- Squadron Orders (aircraft specific)
- Station Order 6280.2
- NATOPS (Naval Aviation Tactical Operations) Navy flight training manual
- NAVAIR 4790 (Fueling and Refueling Operations)

### 4.0 PROCEDURE

#### 4.1 Discussion

Draining fuel from aircraft on the ground (i.e. stationary aircraft) is performed to prevent leakage while the aircraft is on the ground, or to facilitate maintenance operations. There are a series of steps in this process. Sampling is performed first using a "pencil drain" device to test the fuel quality, in order to determine whether it is reusable or not. The fuel is normally collected and reused in aircraft, provided it passes quality testing. If the drained fuel fails quality testing, it is then designated as petroleum, oil, lubricants (POL) waste

and handled accordingly. De-fueling trucks are then used to vacuum the bulk of the fuel out of the aircraft. The "pencil drain" device is then re-inserted in order to "gravity drain" the remaining fuel into a drum or container. When conducting sampling or gravity draining, secondary containment is required. For F-5 aircraft, special buckets are available with valves and hoses specifically designed for direct connection to the aircraft, to facilitate gravity draining, as fuel is automatically purged from the manifolds upon shutdown of this aircraft.

#### **4.2 Operational Controls:**

The following procedures apply:

1. Ensure that Material Safety Data Sheets (MSDS) for aviation fuels (JP-5, JP-8, etc.) are available and current.
2. Ensure that training records for all personnel are current and available for inspection.
3. Ensure that Personal Protective Equipment (PPE) is used including: heavy chemical gloves, aprons, safety glasses and face shields, as well as (when necessary) ear plugs and/or cranial, respirators and Tyvek suits while conducting fuel draining operations on the flight line.
4. Maintain a fully stocked spill kit nearby in a designated location known to all unit personnel.
5. Maintain fire extinguishers nearby in known locations.
6. Ensure that signs reading "Flammable Materials" and "No Smoking," as well as a call list, and instructions about what to do in case of a fire or other emergency, etc. are posted in the area in conspicuous locations.
7. Ensure that secondary containment for draining fuel into a drum or bucket is used, when using the pencil drain device.
8. 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).
9. Ensure appropriate waste container is used to collect fuel after analysis is complete. Use only transfer containers equipped with lids. Check containers for deterioration and structural integrity.
10. Keep containers closed except when materials are added or removed.
11. Do not overfill containers. Ensure containers are only filled to the 80%-90% level.
12. Contact the Hazardous Waste Coordinator (HWC) when HW containers are full for transfer to the HW Satellite Accumulation Area.
13. 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.
14. Clean up all spills immediately upon identification and report to supervisor.

15. Place used rags in approved containers for recycling. Contact HWC when used rag containers are full and obtain an empty container.
16. 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.
17. Ensure that all spills are cleaned up and reported as soon as they are identified.
18. Ensure inspection records are maintained and available.
19. If there are any specific situations or other concerns not addressed by this procedure, contact EMD.

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

The following records must be maintained:

1. MSDSs for all aircraft fuels used at MCAS Miramar.
2. Training records and certifications for all personnel.
3. Spill reports (verbally reported to EMD within 24 hrs, followed up by a written report within 5 days) in accordance with Station Order 6280.2.
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. HAZWOPER training (initial and annual).
3. Technician training (initial/annual health and safety).
4. Weekly on the job (OJT) training.
5. Aircraft specific SOP 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 and 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.

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|--|--------------|
| Fuel Drain Operations – Inspection Checklist |              |
| Date:  | Time:        |
| Installation:                                | Work Center: |
| Inspector’s Name:                            | Signature:   |

| Inspection Items  | Yes | No | Comments |
|---|-----|----|----------|
| 1. Are MSDSs for aviation fuels (JP-5, JP-8, etc.) available and current?<br><i>(29 CFR 1910)</i>   |     |    |          |
| 2. Are training records for all personnel current and available for inspection?<br><i>(29 CFR 1910, MCO P5090.2A)</i>   |     |    |          |
| 3. Is proper PPE used including: heavy chemical gloves, aprons, safety glasses and face shields, ear plugs and/or cranials, respirators and Tyvek suits while conducting fuel draining operations on the flight line.<br><i>(29 CFR 1910)</i> |     |    |          |
| 4. Is a fully stocked spill kit maintained nearby in a designated location?<br><i>(29 CFR 1910, 40 CFR, AAC 18)</i>   |     |    |          |
| 5. Are fire extinguishers nearby in known locations?<br><i>(29 CFR 1910, 40 CFR, AAC 18)</i>  |     |    |          |
| 6. Are signs reading “Flammable Materials, No Smoking”, call list, and what to do in case of a fire or other emergency, etc. posted in the area in conspicuous locations?<br><i>(29 CFR 1910, MCO P5090.2A)</i>                               |     |    |          |
| 7. Is secondary containment used for draining fuel into a drum or bucket, when using the “pencil drain” device?<br><i>(29 CFR 1910, 40 CFR, AAC 18)</i>   |     |    |          |
| 8. Are the appropriate containers used to collect fuel after analysis? With lids? Structural integrity  |     |    |          |

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|--|--|--|--|
| checked?<br>(29 CFR 1910, MCO P5090.2A)  |  |  |  |
| 9. Are all containers labeled identifying the hazardous material being transferred or the waste stream they are intended to collect? If hazardous waste, do the labels contain the following information: Hazardous Waste label, accumulation start date, EPA HW number?<br>(29 CFR 1910, 40 CFR 262.34, MCO P5090.2A) |  |  |  |
| 10. Are containers kept closed except when materials added or removed?<br>(29 CFR 1910, 40 CFR)  |  |  |  |
| 11. Are containers only filled to the 80-90% level?<br>(29 CFR 1910)   |  |  |  |
| 12. Is the HWC contacted when containers are full for transfer to the Satellite Accumulation Area?<br>(MCO P5090.2A)   |  |  |  |
| 13. Is a hazardous waste log maintained that includes container type, accumulation start and end dates, date container taken to the Satellite Accumulation Area, and Manifest number?<br>(40 CFR Part 262)   |  |  |  |
| 14. Are all spills properly cleaned up immediately?<br>(29 CFR 1910, 40 CFR, AAC18)  |  |  |  |
| 15. Are used rags stored in approved containers?<br>(29 CFR 1910, 40 CFR)  |  |  |  |
| 16. Are all spills cleaned and reported as soon as they are identified?<br>(29 CFR 1910, 40 CFR)   |  |  |  |
| 17. Are spills recorded in a spill log book detailing spill date, time, product spilled, quantity, location, cleanup action taken, and name of person reporting the spill?<br>(29 CFR 1910, 40 CFR)  |  |  |  |
| 18. Are inspection records maintained and available for review?<br>(MCO P5090.2A 9104.1(k)(5)- inspection only)  |  |  |  |

**ADDITIONAL COMMENTS:**

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**CORRECTIVE ACTION TAKEN:**

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**Environmental Compliance Coordinator**

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

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

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