

Environmental Standard Operating Procedure			
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Title: Jet Engine Test Cell

1.0 PURPOSE

The purpose of this Environmental Standard Operating Procedure (ESOP) is to provide environmental guidelines for individuals who perform daily operations at the jet engine test cell activities.

2.0 APPLICATION

This guidance applies to those individuals who perform daily operations at the jet engine test cell aboard Marine Corps Air Station (MCAS) Miramar.

3.0 REFERENCES

- 40 CFR 262, (Code of Federal Regulations)
- 29 CFR 1910
- 22 CCR 66265 (California Code of Regulations)
- COMNAVAIRFORINST 4790 Series (Command Naval Air Force Instruction)
- MCO P5090.2A (USMC Environmental Compliance and Protection Manual)
- MCO P5100.8 Series
- MCO P4790.2C
- SDAPCD Rule 210, 40, 50
- Storm-water Pollution Prevention Plan (SWPP).
- NPDES General Permit CAS000001 Section A (10)(a) (National Pollutant Discharge Elimination System)

4.0 PROCEDURE

3.1 Discussion:

The jet engine test cell facility operations utilize JP-5 fuel and generate Mil-L-23699 waste oil, and JP-5 waste fuel. These materials must be managed properly to avoid impacts to human health and the environment.

Waste oil generated by this practice is run through an oil-water separator prior to being accumulated and stored

in waste oil drums. Storage drums for waste oil and waste fuel are maintained at the Division HAZMAT Center. All hazardous materials must be stored in appropriate, approved containers. Units are equipped with approved containers and aboveground storage tanks (ASTs), as necessary. Units should contact the Environmental Management Department (EMD) for replacement of or to request additional containers.

3.2 Operational Controls:

The following procedures apply:

1. Ensure that Material Safety Data Sheets (MSDS) for JP-5 fuel, Mil-L-23699 oil and all other materials associated with this practice are available and current.
2. Ensure that the operation manual NAVY-AL-F404A-MMI-200 for the F404 engine series is available and is in a designated location known to all shop personnel.
3. Ensure that records of all required training and certifications are current and available for inspection.
4. Ensure turnover folder information is kept for this ESOP and available for inspection.
5. Wear appropriate protective personal equipment (PPE) for the task being performed, such as: eye protection, hearing protection, respirators, chemical-resistant clothing, gloves, steel-toed boots and hard hats.
6. Keep a fully stocked spill kit nearby in a designated location known to all personnel and located near any potential hazardous areas.
7. Keep fire extinguishers readily accessible and near potential hazardous areas.
8. Ensure that all required permits are current and available for inspection (e.g. operating permit, etc.).
9. Limit the operation of the T-26 test cell to testing the APU, and the main test cell to testing F-18 aircraft series 404 engines (models 400 and 402).
10. Report total engine hours annually to EMD.
11. Ensure the fuel supply truck or fuel containers are grounded during refueling operations.
12. Ensure that total fuel consumption and number of engines tested is recorded for each test cell.
13. Inspect secondary containment and drainage valves to ensure they are free of leaks and in the fully closed position.
14. Document daily inspections of tanks and weekly inspections of storage areas in an inspection log book.
15. Ensure that all inspection records are maintained and available for inspection for three years.

16. Ensure that all usable hazardous materials (oil, grease, paint) are stored in the hazardous materials (HAZMAT) lockers at the division HAZMAT storage site.
17. Properly label all containers completely and legibly with the following information: the words "Hazardous Waste", accumulation start date, and Environmental Protection Agency (EPA) hazardous waste (HW) number (e.g. D003).
18. Ensure that used fluids are not cross-contaminated with any other fluids or materials (e.g. keep petroleum, oils, and lubricants (POL) separated from chlorinated materials).
19. Keep containers closed except when waste is being added or removed.
20. Ground containers, drums, and ASTs that contain ignitable waste in the satellite accumulation area during waste accumulation.
21. Do not overfill drums and ASTs. Drums and ASTs are considered full when 3 to 4 inches of head space remain to allow for thermal expansion.
22. Update the hazardous waste log at the division HAZMAT center with the date the HW was transferred, and manifest number for each time waste oil or fuel is transferred.
23. Place used rags in approved containers for recycling. Turn in full, used rag containers at the HAZMIN center and obtain an empty container.
24. Ensure that containers or inner liners larger than five gallons that previously held HW are properly marked with word "Empty" and the date it was emptied.
25. Properly clean up all spills immediately and report the spill to the supervisor and EMD.
26. Ensure that a spill report is submitted to the EMD as soon as possible detailing the spill date, time, product spilled, quantity, location, cleanup actions taken, name of the person reporting the spill, etc.
27. 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.
28. Ensure that warning signs are clearly visible and legible from a distance of 25 feet in any direction.
29. If there are any specific situations or other concerns not addressed by this procedure, contact the EMD.

3.3 Documentation and Record Keeping:

The following records must be maintained:

1. MSDSs for all material associated with this practice.
2. Training records and certifications.

3. Operation manuals for the test cell facilities and engines tested.
4. Daily log book containing dates and times of operation and total cumulative hours of operation.
5. Hazardous materials inventory (must match Authorized Usage List).
6. HW transfer actions to HAZMIN Center.
7. Spill log book.
8. Scheduled maintenance logbook Naval Aviation Logistics Command Operating Management Information System (NALCOMIS).
9. Required permits (e.g. San Diego Air Pollution Control District (SDAPCD) operating permit).

3.4 Training:

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

1. Hazard Communication (HazCom) Training.
2. 40-hour Hazardous Waste Operations and Emergency Response Training (initial and annual).
3. First Responder Operations (FRO) Training.
4. Hazmat Safety Training (initial and refresher).
5. Marine Corps Order Training (initial and annual refresher).
6. Station Order training.
7. Preventative Maintenance (maintenance requirement card).
8. On-the-job training (OJT).
9. Operator test facility.

3.5 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.

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.

Jet Engine Test Cell – Inspection Checklist	
Date:	Time:
Installation:	Work Center:
Inspector's Name:	Signature:

Inspection Items	Yes	No	Comments
1. Are MSDSs for JP-5 fuel, Mil-L-23699 oil and all materials associated with this practice available and current? <i>(29 CFR 1910.1200(g)(8))</i>			
2. Is the operation Manual NAVY-AL-F404A-MMI-200 for the F404 engine series available and in a designated location known to all shop personnel? <i>(MCO P5090.2A)</i>			
3. Are all required training and certifications records current and available for inspection? <i>(MCO P5090.2A 9102.19(k)(5))</i>			
4. Is turnover folder information kept for this ESOP and available for inspection? <i>(MCO P4790.2C)</i>			
5. Do all shop personnel wear appropriate PPE such as: eye protection, hearing protection, respirators, chemical-resistant clothing, gloves, steel-toed boots and hard hats? <i>(29, CFR 1910, MCO P5090.2A)</i>			
6. Is a fully stocked spill kit kept nearby in a designated location known to all personnel and located near any potentially hazardous areas? <i>(29 CFR 1910, MCO P5090.2A)</i>			
7. Are all required permits current and available for inspection? <i>(MCO P5090.2A)</i>			
8. Is the operation of the T-26 test cell limited to testing auxiliary power units, and the operation of the main test cell limited to testing F-18 aircraft series 404 engines (models 400 and 402)? <i>(SDAPCD permit, MCO P5090.2A)</i>			
9. Are total engine hours (run time) reported annually? <i>(SDAPCD permit, MCO P5090.2A)</i>			
10. Are fuel supply trucks and fuel containers grounded during refueling operations? <i>(29 CFR 1910, MCO P5090.2A)</i>			
11. Are total fuel consumption and number of engines tested			

recorded for each test cell? (SDAPCD Permit, MCO P5090.2A)			
12. Are secondary containments inspected and drainage valves inspected to ensure they are free of leaks and in the fully closed position? (MCO 5090.2A, 9104,h(2)(h); 40 CFR 262)			
13. Are daily inspections of tanks and weekly inspections of storage areas documented? (40 CFR 262, MCO P5090.2A)			
14. Are all inspection records maintained and available for examination for three years? (40 CFR 262, MCO P5090.2A)			
15. Are all usable hazardous materials (oil, grease, paint) stored in the HAZMAT lockers at the division HAZMAT storage site? (40 CFR 262, MCO P5090.2A)			
16. Are all containers properly labeled completely and legibly with the following information: the words "Hazardous Waste", accumulation start date, and EPA HW number (e.g. D003)? (40 CFR 262, MCO P5090.2)			
17. Are used fluids kept free of cross-contamination from any other fluids or materials? (40 CFR 262, 22 CCR 66265, MCO P5090)			
18. Are containers kept closed except when HW is being added or removed? (40 CFR 262, 22 CCR 66265.173(a), MCO P5090.2)			
19. Are containers, drums, or ASTs with ignitable waste in the satellite accumulation area grounded during waste accumulation? (29 CFR 1910, 22 CCR 66265.173(b), MCO P5090.5A)			
20. Are drums and ASTs under-filled with 3 to 4 inches of head space remaining to allow for thermal expansion? (40 CFR 262, 22 CCR 66265.173(b), MCO P5090.2A)			
21. Is the HW log at the division HAZMAT center updated with the date the HW was taken to HAZMAT center and the manifest number each time waste oil or fuel is transferred? (40 CFR 262, MCO P5090.2A)			
22. Are all spills properly cleaned up immediately and reported to the supervisor and EMD? (40 CFR 262, MCO P5090.2A)			
23. Ensure that a spill report is submitted to the EMD as soon as possible detailing the spill date, time, product spilled, quantity, location, cleanup actions taken, name of the person reporting the spill, etc. (40 CFR 262, MCO P5090.2A)			
24. Are all spills 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?			

<i>(40 CFR 262, MCO P5090.2A)</i>			
25. Are used rags placed in an approved container for recycling, and are full used rag containers turned in at the HAZMIN Center and an empty replacement container obtained? <i>(29 CFR 1910, MCO P5090.2A)</i>			
26. Are containers or inner liners larger than five gallons that previously held HW properly marked with word "Empty" and the date it was emptied? <i>(40 CFR 262, MCO P5090.2A)</i>			
27. Are warning signs clearly visible and legible from a distance of 25 feet in any direction? <i>(29 CFR 1910, MCO P5090.2A)</i>			

ADDITIONAL COMMENTS:

CORRECTIVE ACTION TAKEN:

Environmental Compliance Coordinator

Name: _____

Signature: _____

Date: _____