



~~UNITED STATES MARINE CORPS~~  
ORIGINAL  
MARINE CORPS AIR STATION  
BEAUFORT, SOUTH CAROLINA 29904-5000

ASO 5090.3A WJCH 1  
NREAO  
16 DEC 2007

AIR STATION ORDER 5090.3A WJCA 1

From: Commanding Officer  
To: Distribution List

Subj: OIL WATER SEPARATORS AND WASH RACKS

Encl: (1) Inventory list of Oil Water Separators

1. Situation. Establish the proper operation, maintenance and responsibility of the oil water separators and wash racks at the Marine Corps Air Station.

2. Mission. Ensure oil water separators and wash racks are properly maintained.

3. Execution

a. Commander's Intent and Concept of Operations

(1) Commander's Intent. Ensure that the effluent will comply with the National Pollutant Discharge Elimination System Permit Program (40 CFR 122).

(2) Concept of Operations. The effluent from oil water separators is discharged to the sanitary sewer system, thus making it regulated under the Clean Water Act. The presence of detergents and emulsifying agents seriously affects the performance of oil water separators. The function of the oil water separator is to separate traces of oil from water. No other pollutants or items such as soap, solvents, etc. are separated in the oil water separators. Oil water separators are not designed to separate solids or high concentrations of oils from water.

b. Subordinate Element Missions

(1) Headquarters and Headquarters Squadron

(a) Responsibility for operation of individual wash racks and associated oil water separators is established as follows:

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1. Facility adjacent to Building 594 - MAG 31.
2. Facility adjacent to Building 616 - MAG 31.
3. Facility adjacent to Building 626 - MWSS 273.
4. Facility adjacent to Building 728 - MAG 31.

(b) Responsibility for oil water separators not associated with wash racks is established as follows:

1. Oil water separator at Burn Pit - Aircraft Rescue and Firefighting (ARFF).

2. Oil water separator located at Building 565 - CSSD-23.

3. Oil water separator located at Building 603 - MALS 31, Power Plants, w/c 450 (test cell).

4. Oil water separator located at Building 1259- MALS 31, Power Plants, w/c 450 (T-10 test cell).

5. Oil water separator located at Corrosion Control Facility - Building 1256 - MALS 31.

6. Oil water separators at individual hangars and buildings - Current tenants of hangars and buildings.

(c) Responsibility for maintenance, pumping/cleaning of oil water separators and responding to maintenance tickets - Public Works.

(d) The appropriate personnel shall call Public Works Trouble desk (228-7527) for assistance if there is a malfunction of the oil water separator.

(2) Commanding Officers, Department Heads and Officers in Charge. Ensure compliance with this Order to include required personnel training on proper operation and maintenance of oil water separators and wash racks.

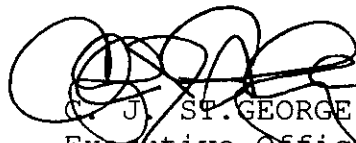
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4. Administration and Logistics. The point of contact for each oil water separator and wash rack will be provided to the Natural Resources and Environmental Affairs Office (NREAO). The point of contact for NREAO is J. B. Sinclair at 228-7373.

5. Command and Signal

a. Signal. This Order is effective the date signed.

b. Command. This Order is applicable to the Marine Corps Air Station Beaufort and has been concurred with by all tenant commands.

  
C. J. ST. GEORGE  
Executive Officer

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UNITED STATES MARINE CORPS  
MARINE CORPS AIR STATION  
BEAUFORT, SOUTH CAROLINA 29904-5001

IN REPLY REFER TO  
ASO 5090.3A W CH1  
NREAO

05 SEP 2007

AIR STATION ORDER 5090.3A CH1

From: Commanding Officer  
To: Distribution List

Subj: OIL WATER SEPARATORS AND WASH RACKS

Encl: (1) Replacement page for enclosure (1)

1. Purpose. To direct a change in the basic order.
2. Action. Replace enclosure (1) "Oil Water Separator Inventory - MCAS Beaufort" with enclosure (1) dated August 2005 "Oil Water Separator Inventory MCAS Beaufort".
3. Filing Instructions. This change transmittal will be filed immediately following the signature page of the current order.

R. W. LANHAM

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UNITED STATES MARINE CORPS  
MARINE CORPS AIR STATION  
BEAUFORT, SOUTH CAROLINA 29904-5001

ASO 5090.3A Ch 2

NREAO

14 SEP 2010

AIR STATION ORDER 5090.3A Ch 2

From: Commanding Officer, Marine Corps Air Station Beaufort  
To: Distribution List

Subj: OIL WATER SEPARATORS AND WASH RACKS

Encl: (1) New page inserts to ASO 5090.3A

1. Situation. To direct changes to the basic Order and replace Enclosure (1) with updated corresponding enclosure.

2. Mission. Ensure oil water separators and wash racks are properly maintained.

3. Execution

a. Replace enclosure (1) "Oil Water Separator Inventory-MCAS Beaufort" with enclosure (1) dated June 2010.

b. Updated corresponding enclosure labeled enclosure (1). Add the following sub-paragraphs to 3.b.(1)(a):

(1) "Facility adjacent to building 416 - MAG-31."

(2) "Facility adjacent to building 1313 - Aircraft Rescue Fire Fighting (ARFF) - MALS."

c. Paragraph 3.b.(1)(b), replace sub-paragraph 3 with "Oil water separator located at building 1226-Lab, MALS-31."

d. Replace paragraph 3.d. with "(d) The appropriate personnel shall call the Public Works Trouble Desk (228-7527) for assistance if there is a malfunction of the oil water separator and/or wash rack."

e. Replace paragraph 4 with "4. Administration and Logistics. The point of contact for each oil water separator and wash rack will be provided to the Natural Resources and Environmental Affairs Office (NREAO). The point of contact for NREAO is Eugene R. Batten at 228-6055."

B. C. MURTHA

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**OIL POLLUTION PREVENTION FACILITY MANAGEMENT PLAN UPDATE  
MARINE CORPS AIR STATION BEAUFORT, SC**

**SECTION 2  
OWS FACILITY ASSESSMENT**

**Table 2-1 Inventory of OWS Assessment Information**

Topic	Oil Pollution Abatement Facility		
Adjacent to building	626	1064	661
Activity area	1070 Washrack	Vehicle repair bays	Vehicle repair bays
Drawing No.	PW9833, PW9842	PW9832, PW9835, PW10428 thru 10430, PW6323, PW6357	PW9832, PW9835
AH Figure/Sketch	4.2	4.4	4.6
OWS manufacturer	Highland Tank	Xerxes	Josam
OWS type	Parallel plate	Vertical Tube	Gravity interceptor
Maintenance	No records	No records	No records
Repair history	No records	No records	No records
Generation rates per month	20-40 Gal oil/water	40-60 Gal oil/water	0 Gal
Pump-out frequency	Monthly	Monthly	Monthly
Training needs	Public Works briefing	Public Works briefing	Public Works briefing
Spill/upset history	No record	No record	No record
Pollutant generation	No record	No record	No record
Capacity—Tank Total Oil (Gal)	1000/500	1000/600	316/110
Operational Maximum flow rate (GPM)	34	17	17
Highest flow rate (GPM)	191	17	17
Separation mins. available (hose)	29.4	58.8	18.6
Separation mins. available (high)	5.3	58.8	18.6
Grit collection Design depth inches	12	4.8	24
Oil abatement requirement	<10 ppm ultimate	<10 ppm ultimate	<10 ppm ultimate
Original design specifications	100 GPM	100 GPM	100 GPM
Actual performance	Ineffective	No record	No record
	10-year storm flow rate exceeds capacity. Poor grit chamber cleaning. Alarm out of service.	Equipped with alarm. 79" lid to bottom. 600 gal integral tank. No vents.	

**ENCLOSURE (1)**



**Table 2-1 Inventory of OWS Assessment Information (continued)**

Topic	Oil Pollution Abatement Facility		
Adjacent to building	426	565	843
Activity area	Secondary containment	Vehicle Maintenance	Vehicle maintenance shop
Drawing No.	PW10428, PW10429, PW10431,	PW10428 thru 0430, PW4275, PW9839	PW9832, PW9833, PW9843 thru 9845
AH Figure/Sketch	4.8	4.10	4.12
OWS manufacturer	Josam	Americast	Clearwater Separator
OWS type	Gravity interceptor	Vertical tube	Inclined coalescer tubes
Maintenance	No record	No record.	Cleaned 2003
Repair history	No record	No record	No record
Generation rate per month	No record	10-12 Gal oil/water	200 Gal oil
Pump-put frequency	Not required	Monthly	Two weeks
Training needs	Not required	Public Works briefing	Not required.
Spill/upset history	No record	No record	No record
Pollutant generation	No record	No record	No record
Capacity—Tank Total Oil (Gal)	316/110	1125/700	4650/4000
Operational Maximum flow rate (GPM)	N/A	17	100
Highest flow rate (GPM)	N/A	58	100
Separation mins. available (hose)	N/A	66.2	46.5
Separation mins. available (high)	N/A	19.4	46.5
Grit collection Design depth inches	24	3	24
Oil abatement requirement	<10 ppm ultimate	<10 ppm ultimate	<10 ppm ultimate
Original design specifications	100 GPM	100 GPM	250 GPM
Actual performance	No record	No record	No record
	Storm drainage from secondary containment. No hoses or spontaneous rain.	Sludge level steady at 1". No vents.	1270-gal integral tank. Vacuum truck contents treatment.

**ENCLOSURE (1)**



**Table 2-1 Inventory of OWS Assessment Information (continued)**

Topic	Oil Pollution Abatement Facility		
Adjacent to building	1131	1084	1097
Activity area	Burn pit	NDI Facility	Open test cell
Drawing No.	PW2901	PW7775, PW7777	PW10428, PW10429
AH Figure/Sketch	4.14	4.16	4.18
OWS manufacturer	Clearwater Separator	Highland Tank	Josam
OWS type	Inclined coalescing tubes	Parallel plate	Gravity interceptor
Maintenance	No record	No record	No record
Repair history	No record	No record	No record
Generation rate per month	Trace product	No record	No record
Pump-put frequency	6 months	No record	No record
Training needs	Public Works briefing	Public Works briefing	Not required.
Spill/upset history	No record	No record	No record
Pollutant generation	No record	No record	No record
Capacity—Tank Total Oil (Gal)	4650/4000	1000/500	316/110
Operational Maximum flow rate (GPM)	83	17	17
Highest flow rate (GPM)	144	17	64
Separation mins. available (hose)	56	58.8	18.5
Separation mins. available (high)	32	58.8	4.9
Grit collection Design depth inches	24	12	24
Oil abatement requirement	<10 ppm ultimate	<10 ppm ultimate	<10 ppm ultimate
Original design specifications	250 GPM	100 GPM	100 GPM
Actual performance	No record	No record	Ineffective
	ARFF only uses facility twice a year.	Floor rinse. Based upon 48-inch diameter separator designed for 100 GPM. Poor access and no vents.	Not in use. Poor access. UST vent pipe only.

**ENCLOSURE (1)**





**Table 2-1 Inventory of OWS Assessment Information (continued)**

Type	Oil Pollution Abatement Facility	Oil Pollution Abatement Facility	Oil Pollution Abatement Facility
Adjacent to building	Hangar 414	Hangar 416	Hangar 418
Activity area	Aircraft maintenance	Aircraft maintenance	Aircraft maintenance
Drawing No.	PW9832, PW9840	PW9701, PW9699, PW9700	PW9837
AH Figure/Sketch	4.20	4.22	4.24
OWS manufacturer	Highland Tank	Stevens & Wilkinson	Highland Tank
OWS type	Parallel plate	Gravity interceptor	Parallel plate
Maintenance	No record	No record	No records
Repair history	No record	No record	No records
Generation rate per month	No record	No record	No records
Pump-put frequency	No record	No record	No records
Training needs	Public Works briefing	Public Works briefing	Public Works briefing
Spill/upset history	No record	No record	No records
Pollutant generation	No record	No record	No records
Capacity—Tank Total Oil (Gal)	2000/1000	1164/180	1000/500
Operational Maximum flow rate (GPM)	17	17	17
Highest flow rate (GPM)	17	17	17
Separation mins. available (hose)	118	68.4	58.8
Separation mins. available (high)	118	68.4	58.8
Grit collection Design depth inches	12	12	12
Oil abatement requirement	<10 ppm ultimate	<10 ppm ultimate	<10 ppm ultimate
Original design specifications	150 GPM	No Record	100 GPM
Actual performance	No record	No Record	No record
	500-gal external storage. Equipped with alarm.	Based upon 48-inch diameter separator designed for 100 GPM. Possible cross-connection. Equipped with alarm.	500-gal external storage. No venting. Equipped with alarm.

**ENCLOSURE (1)**

Table 2-1 Inventory of OWS Assessment Information (continued)

Topic	Oil Pollution Abatement Facility		
Adjacent to building	Hangar 594	Hangar 728	Hangar 729
Activity area	Aircraft maintenance	Aircraft maintenance	Aircraft maintenance
Drawing No.	PW9329, PW9330, PW3528 thru 3532, PW9832, PW9841	PW9329, PW9330, PW3528 thru 3532, PW9832, PW9838	PW9832, PW9838
AH Figure/Sketch	4.26	4.28	4.30
OWS manufacturer	Highland Tank	Highland Tank	Highland Tank
OWS type	Parallel plate	Parallel plate	Parallel plate
Maintenance	No record	No record	No record
Repair history	No record	No record	No record
Generation rate per month	No record	No record	No record
Pump-put frequency	No record	No record	No record
Training needs	Public Works briefing	Public Works briefing	Public Works briefing
Spill/upset history	No record	No record	No record
Pollutant generation	No record	No record	No record
Capacity—Tank Total Oil (Gal)	1000/500	1000/500	1000/500
Operational Maximum flow rate (GPM)	17	17	17
Highest flow rate (GPM)	17	17	17
Separation mins. available (hose)	58.8	58.8	58.8
Separation mins. available (high)	58.8	58.8	58.8
Grit collection Design depth inches	12	12	12
Oil abatement requirement	<10 ppm ultimate	<10 ppm ultimate	<10 ppm ultimate
Original design specifications	100 GPM	100 GPM	100 GPM
Actual performance	No record	No record	No record
	500-gal external storage. Equipped with alarm.	UST vault with 900-gal capacity. Equipped with alarm.	UST vault with 900-gal capacity. Equipped with alarm.

ENCLOSURE (1)



Table 2-1 Inventory of OWS Assessment Information (continued)

Topic	Oil Pollution Abatement Facility		
Adjacent to building	1213	953	959
Activity area	East Wash Rack	West Wash Rack	GSE Wash Rack
Drawing No.		PW3529, PW3532, PW3531, PW3530, PW3528, PW9330, PW9329	PW3529, PW3532, PW3531, PW3530, PW3528, PW9330, PW9329
AH Figure/Sketch	4.32	4.34	4.36
OWS manufacturer	Highland Tank	Enco Pollution Control Co.	Enco Pollution Control Co.
OWS type	Parallel plate	Parallel plate	Parallel plate
Maintenance	2003	No record	No record
Repair history	No record	No record	No record
Generation rate per month	No record	No record	No record
Pump-put frequency	No record	No record	No record
Training needs	Public Works briefing	Public Works briefing	Public Works briefing
Spill/upset history	No record	No record	No record
Pollutant generation	No record	No record	No record
Capacity—Tank Total Oil (Gal)	1000/500	2000/1000	2000/1000
Operational Maximum flow rate (GPM)	34	34	34
Stormwater flow rate (GPM)	207	556	172
Separation mins. available (hose)	29.4	58.8	58.8
Separation mins. available (storm)	4.8	3.6	11.6
Grit collection Design depth inches	12	9.6	9.6
Oil abatement requirement	<10 ppm ultimate	<10 ppm ultimate	<10 ppm ultimate
Original design specifications	100 GPM	150 GPM	150 GPM
Actual performance	Storm flow can overload.	Apron run-on overload	Apron run-on overload
	Based upon 48-inch diameter separator designed for 100 GPM. Equipped with alarm. Storm flow can by-pass OWS.	Equipped with alarm. Storm flow can by-pass OWS.	Equipped with alarm. Storm flow can by-pass OWS.

ENCLOSURE (1)



Table 2-1 Inventory of OWS Assessment Information (continued)

Topic	Oil Pollution Abatement Facility		
Adjacent to building	1208	595	595
Activity area	Engine shop	Fire Department	ARFF
Drawing No.	PW7775, PW7777	PW9832, PW9837, PW10428, PW10429, PW10432	PW9832, PW9837, PW10428, PW10429, PW10432
AH Figure/Sketch	4-38	4-40	4-42
OWS manufacturer	Highland Tank	Highland Tank	No record
OWS type	Parallel plate	Parallel plate	Gravity inspector
Maintenance	No record	No record	No record
Repair history	No record	No record	No record
Generation rate per month	No record	No record	No record
Pump-put frequency	No record	No record	No record
Training needs	Public Works briefing	Public Works briefing	Not required
Spill/upset history	No record	No record	No record
Pollutant generation	No record	No record	No record
Capacity—Tank Total Oil (Gal)	1000/500	1000/500	No record
Operational Maximum flow rate (GPM)	17	17	17
Highest flow rate (GPM)	17	17	17
Separation mins. available (hose)	58.8	58.8	Not determined
Separation mins. available (high)	58.8	58.8	N/A
Grit collection Design depth inches	12	12	Not determined
Oil abatement requirement	<10 ppm ultimate	<10 ppm ultimate	<10 ppm ultimate
Original design specifications	100 GPM	100 GPM	No record
Actual performance	No record	No record	No record
	Equipped with alarm. Based upon 48 inch diameter separator designed for 100 GPM. Poor access.	200-gal integral storage.	No vents. Not in use.

ENCLOSURE (I)



**Table 2-1 Inventory of OWS Assessment Information (continued)**

Topic	Oil Pollution Abatement Facility		
Adjacent to building	1256	1269	552
Activity area	Corrosion Control Facility	T10 Test Cell	Tank Farm B Day Tanks
Drawing No.	Not available	PW14763, PW14765, PW14829	PW14132, PW14142
AH Figure/Sketch	4-44	4-46	4-48
OWS manufacturer	Highland Tank	AFL Industries	Hydro Quip
OWS type	Parallel plate	Vertical tubes	Vertical tubes
Maintenance	No record	No record	No record
Repair history	No record	No record	No record
Generation rate per month	No record	No record	No record
Pump-put frequency	No record	No record	No record
Training needs	Public Works briefing	Public Works briefing	Not required
Spill/upset history	No record	No record	No record
Pollutant generation	No record	No record	No record
Capacity—Tank Total Oil (Gal)	1000/500	1000/500	7400
Operational Maximum flow rate (GPM)	17	17	NA
Highest flow rate (GPM)	17	17	NA
Separation mins. available (hose)	58.8	58.8	NA
Separation mins. available (high)	58.8	58.8	NA
Grit collection Design depth inches	12	3	0"
Oil abatement requirement	<10 ppm ultimate	<10 ppm ultimate	<10 ppm ultimate
Original design specifications	100 GPM	100 GPM	1300 GPM
Actual performance	No record	No record	No record
	Equipped with alarm. Based upon 48-inch diameter separator designed for 100 GPM. Poor access.	200-gal integral storage.	Controlled release to OWS.

**ENCLOSURE (i)**

Type	Oil Pollution Abatement Facility		
Adjacent to building	1226	1313	1331
Activity area	Bldg 1226 Lab	Aircraft Fire Rescue	Bldg 1331
Drawing No.	Fig 4-51, Fig 4-52	Fig 4-53, Fig 4-54	Fig 4-55, Fig 4-56
AH Figure/Sketch	4-52	4-54	4-56
OWS manufacturer	Highland Tank Inc.	RGF Envir. Group (800-843-7771)	AFL Industries
OWS type	Gravity Intercept	¼" Coalescing Tube	Coalescing Tube
Maintenance	No records	No records	No record
Repair history	No records	No records	No record
Generation rates per month	10 Gal oil/water	20 Gal oil/water	No record
Pump-out frequency	Monthly	Monthly	No record
Training needs	Public Works briefing	Public Works briefing	Public Works briefing
Spill/upset history	No record	No record	No record
Pollutant generation	No record	No record	No record
Capacity—Tank Total Oil (Gal)	10 gal	180 gal	145/400 gal
Operational Maximum flow rate (GPM)	35 gpm	20 gpm	20 gpm
Highest flow rate (GPM)	10 gpm	20 gpm	20 gpm
Separation mins. available (hose)	NA	NA	58.8
Separation mins. available (high)	NA	NA	58.8
Grit collection Design depth inches	No Grit Chamber	Separate Grit Chamber	Separate Grit Chamber
Oil abatement requirement	<35 ppm ultimate	<10 ppm ultimate	<10 ppm ultimate
Original design specifications	10 GPM	10 GPM	100 GPM
Actual performance	No record	No record	No record
	Serves Lab Sample Containment Issues with minor bldg Roof Runoff.	Serves Storm Drainage from Covered Car Wash.	290-gal integral storage.

ENCLOSURE (1)



Table 2-1 Inventory of OWS Assessment Information (continued)

Topic	Oil Pollution Abatement Facility
Adjacent to building	403
Activity area	Tank Farm C
Drawing No.	PW14138, PW14142
AH Figure/Sketch	4-50
OWS manufacturer	Hydro Quip
OWS type	Vertical tube
Maintenance	No record
Repair History	No record
Generation rate per month	No record
Pump-out frequency	No record
Training needs	Not required
Spill/upset history	No record
Pollutant generation	No record
Capacity—Tank Total / Oil (Gal)	2200
Operational Maximum flow rate (GPM)	NA
Highest flow rate (GPM)	NA
Separation mins. available (hose)	NA
Separation mins. available (high)	NA
Grit Collection Design depth inches	0"
Oil abatement requirement	<10 ppm ultimate
Original design specifications	700 GPM
Actual performance	No record
	Controlled release to OWS.

ENCLOSURE (1)



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**ENCLOSURE (1)**