



# WFP Deployment Instructions

<b>Document Number</b> 8310-61103-00002	<b>Based on</b> 8310-61103	<b>Version</b> 0-04	<b>Author</b> M. Vardaro, W. Waldorf, L. Morgan
<b>Common Term for Platform</b> Washington Offshore WFP	<b>Date of Template</b> 2014-03-28		<b>Approver of Checklist Tasks</b> Edward P. Dever

Fill information out in checklist section, if digital.

<b>Reference Designator &amp;</b> CE09OSPM	<b>Date Of Cruise</b> Fall, 2014	<b>Conductor</b> E. Dever, C. Holm, C. Risien, T. Rohrer, W. Waldorf
<b>Deployment #</b> -00002	<b>Start Date</b> 2014-10-07	<b>End Date</b> 2014-10-08

<b>Scope &amp; Description</b> These instructions are for the deployment of a wire following profiler mooring from an intermediate class UNOLS vessel (Oceanus)	<b>Required Tools &amp; Equipment</b> <ul style="list-style-type: none"> <li>• Load rated quick release – MCD provided by manufacturer</li> <li>• Ship's crane – MCD provided by OSU Ship Operations and crane manufacturer</li> <li>• Ship's A-frame – MCD supplied by OSU Ship Operations</li> <li>• Heavy lift winch – MCD provided by winch manufacturer</li> <li>• Tension Member – 0.5 in Amsteel blue rope, average brea strength 34,000 lbs</li> <li>• Mooring Block – EA/OOI supplied, appropriately load rated, (MCD supplied by manufacturer)</li> <li>• Heavy load strong back release - EA/OOI supplied, appropriately load rated (proof tested to 25,000 lbs)</li> <li>• Note: All marine hardware (shackles, sling links, lifting straps, etc.) will be appropriately load rated.</li> </ul>
<b>Reference Documents</b> 3605-40001, Endurance Washington Offshore Coastal Profiling Mooring Water Depth 542m	
<b>Safety Considerations</b> All operations will require safe sea states (generally less than 5-6) for operation, and will be approved and monitored by the ship's captain.	
<b>Required PPE</b> Hard hats, close-toed shoes, work vests, and work gloves.	

<b>CE09OSPM-00002</b>	<b>Start Date:</b> 2014-10-07	<b>Cruise Date:</b> Fall, 2014
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Step	Instructions	Initials	Date / Time	Results/Notes
1	Operations briefing on bridge. Determine a starting position downwind of the anchor site based on a total deployment time of approximately 3 hours.	EPD	2014-10-07 0633	Dave performed bridge briefing
2	BUOY - Remove Magnet	EPD	2014-10-07 0800	Craig
	Insert Dummy plug in Shore AUX power	EPD	0800	Craig
	Inspect end cap (all dummy plugs / cable in place)	EPD	0800	Craig
3	XEOS Start KILO	EPD	0800	Craig
	SPHERE - Start KILO and Flasher	EPD	0800	Craig
4	MMP - Remove CTD plugs, PAR cover, BB2F Cover			
5	Make final mechanical connections and preparations on deck. Ensure that all flanges are torqued to specifications. Put surface buoy on starboard rail, connected to ship's crane via load-rated quick release. Stretch hose should be connected outboard of A-frame to syntactic sphere. Syntactic sphere should be placed under A-frame, connected to heavy lift winch with load-rated quick release. Mace anchor should be secured next to sphere under A-frame, where it is able to be picked up. Syntactic sphere should be connected to EM chain, which is connected to the wire, pre-wound onto TSE winch.	EPD	2014-10-07 200 PPT	performed by Walt, Chris H, Daryl, Dave et al.
6	As wire is loaded on TSE winch, mark where upper and lower bumpers will be attached, at 30m and 500m.	EPD	2014-10-07 200	bumpers to be placed 1' from each term.
7	Reeve 5/16" mooring wire through travelling mooring block on A-frame, make hardware connections to 3-meter EM chain below syntactic buoy. Attach McLane Moored Profiler (MMP) top bumper.	EPD	2014-10-07 0837	Tully - bumper
8	Conduct a walk-through of the deployment operation on deck, including all personnel involved.	EPD	0840	
9	Remove syringe and tubing from profiler CTD.	EPD	0840	Chris H
10	Remove protective caps and clean profiler optical instrument surfaces	EPD	0840	Chris H
11	When ready, lower the lifelines at the fantail, remove securing straps on surface buoy.	EPD	0900	

CE09OSPM-00002		Start Date:	yyyy-mm-dd	Cruise Date:	Fall, 2014
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12	Deploy profiler buoy over starboard side using ship's crane and load-rated quick release. Control load using slip lines.	EPD	2014-10-08 0908	3 slip lines used	
13	Stretch hose should be allowed to follow buoy into the water, then syntactic sphere is lifted with heavy lift winch and A-frame, and quick released into the water. Control load with slip lines.	EPD	0909	lifting bail used HUW removed caught on top of float, should be OK	
14	Slowly payout 5/16" mooring wire on TSE winch through travelling block. After mooring components are well aft of ship, stop wire, attach Yale grip to wire and hold load.	EPD	0916	0922	
15	Lay out large service loop of wire onto deck, and attach MMP to mooring cable. Make sure profiler is attached right side up!	EPD	0930		
16	Rig slip line to top of profiler from bottom of mooring block to allow a controlled descent as load is taken on TSE winch and transferred from Yale grip.	EPD	0935		
17	Use winch to pull slack out of wire, lift MMP while controlling with slip line, and remove Yale grip once load has been transferred.	EPD	0938		
18	Boom A-frame out, lower MMP gently into the water using slip line.	EPD	0942		
19	Continue paying out wire	EPD	0942 -	0951	
20	When mark indicating lower bumper position exits the wide-mouth block, stop off wire rope using Yale grip and attach lower MMP bumper.	EPD	0955		
21	Once end of wire has been reached, and shackle has passed outboard of travelling block, stop off upper shackle using stopper chain fixed to A-frame. Bring A-frame inboard to assist.	EPD	1005		
22	Use TSE winch and stopper line to adjust the position of the first Backup Recovery Buoy (BRB) module and allow attachment to upper shackle. Connect lower shackle to bottom of BRB.	EPD	1011		
23	Use TSE winch and stopper line with in-line quick release, raise package, boom the a-frame out keeping the load level. Add chaff guard between wire and transom.	EPD	1012		
24	Lower package over the stern, and quick release BRB	EPD	1015		
25	Repeat steps 23 and 24 until in-line mooring components (BRB, acoustic release, BRB, and line pack acoustic release) are deployed.	EPD	1029	1034	
	Transfer load from TSE winch to heavy lift winch. May use capstan to pull load towards heavy lift winch.	EPD	1032	no capstan on this trip	
	Make hardware connections to anchor. Note anchor still secured to deck and load is secured to anchor.	EPD	1042		
	Attach strongback to mooring anchor using sacrificial link, take tension on heavy lift winch. Unsecure the anchor from the deck and overboard. Control load with slip lines as mooring anchor is overboarded.	EPD	1042 - anchor unsecured 1044 - load transfer	remove had slight delay	
26	At approximately 30 minutes from the drop site (consult with captain), raise the anchor off deck, boom a-frame out, lower anchor through water column until it is ~10m off bottom. (At 20m/min lowering rate, we need 30 minutes to pay out 542m - be sure and allow enough lowering time to drop site).	EPD	1048	Start payout w/ HUW	
27	Once over drop position, send acoustic command to release anchor.	CEW	1207	46° 51.166' N Release 124° 57.969' W mol free. Lower	
28	Once the anchor has been released, recover strongback release.	CEW	1209 1246	BEGIN BRINGING LINE IN. <u>to bottom</u>	
29	Operation is complete.	CEW	1246	ON DECK	
30					

Personnel: F. Last, F2. Last2