

Conversions:

Distance and Energy				
Kilowatts (kW)	X	1.341	=	Horsepower (hp)
Feet (ft)	X	3.281	=	Meters (m)
Long Ton (LT)	X	.98421	=	Metric Ton (t)
Liquid (NOTE: Values are approximate.)				
Liquid	bb/LT	m ³ /t	bb/m ³	bb/t
Freshwater	6.40	1.00	6.29	6.29
Saltwater	6.24	.975	6.13	5.98
Heavy Oil	6.77	1.06	6.66	7.06
DFM	6.60	1.19	7.48	8.91
Lube Oil	7.66	1.20	7.54	9.05
Weight				
1 Long Ton	=	2240 lbs	1 Metric Ton	= 2204 lbs
1 Short Ton	=	2000 lbs	1 Cubic Foot	= 7.48 gal
1 Barrel (oil)	=	5.61 ft = 42 gal = 6.29 m ³	1 psi	= .06895 Bar = 2.3106 ft of water
Temperature: Fahrenheit = Celsius ($^{\circ}\text{F} = 9/5\ ^{\circ}\text{C} + 32$ and $^{\circ}\text{C} = 5/9\ (^{\circ}\text{F} - 32)$)				
0	=	-17.8	80	= 26.7
32	=	0	90	= 32.2
40	=	4.4	100	= 37.8
50	=	10.0	110	= 43.3
60	=	15.6	120	= 48.9
70	=	21.1	150	= 65.6
200	=	93.3	250	= 121.1
300	=	148.9	400	= 204.4
400	=	204.4	500	= 260
500	=	260	1000	= 537.8
Pressure: Bars = Pounds per square inch				
1 Bar	=	14.5 psi	5 Bars	= 72.5 psi
2 bars	=	29.0 psi	6 Bars	= 87.0 psi
3 Bars	=	43.5 psi	7 Bars	= 101.5 psi
4 Bars	=	58.0 psi	8 Bars	= 116.0 psi
9 Bars	=	130.5 psi	10 Bars	= 145.0 psi

United States Coast Guard



**FIXED PLATFORM INSPECTOR
Job Aid**

Name of Facility		
Facility ID Number		Activity Number
Date Completed	Priority	Points
Location		
Marine Inspectors:		
1. _____	5. _____	
2. _____	6. _____	
3. _____	7. _____	
4. _____	8. _____	

Job Aid FPI
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IMMEDIATELY LEAVE ANY CONFINED SPACE IF:

- A personal monitor alarms;
- You feel dizzy or lightheaded;
- The forced air ventilation stops or is apparently ineffective; or
- If you sense any unexpected chemical through smell or dermal sensation that concerns you. This is a judgment call; however, you should depart any time there is a burning sensation in your lungs or you experience a shortness of breath. Any of these sensations may indicate a life threatening situation and you must react promptly to avoid injury.

Note: Climbing (other than on ladders) shall be limited to 5ft.

Steps to Take After Entry for All Confined Spaces

- Immediately contact your chain of command if you left a confined space for any of the reasons noted above. Do not reenter any confined space until notification of appropriate senior personnel and direction from your supervisor is obtained.
- Report any inconsistencies in the marine chemist certificate or competent person log to your supervisor and follow-up with a letter to Commandant CG-113 via your District (industrial hygienist).
- In the event of overexposure, personnel should be evacuated to appropriate medical facilities by the most expeditious means. Medical personnel should be provided with all known information on the suspected exposure, including concentration and duration of exposure. This should include the most probable route of exposure. Also provide the medical authority with the phone number to American Toxic Substance and Disease Registry (ATSDR).

Section 2: Inspection Items

- 1. Research Bureau of Safety and Environmental Enforcement (BSEE)/Coast Guard (CG) Memorandum of Agreement OCS-09 43 USC 1331
33 CFR 140.101
- 2. Schedule inspection in Maritime Information for Safety and Law Enforcement (MISLE) MISLE User Guide
- 3. Coordinate inspection with facility's representative MPS-PR-SEC-01
MPS-PR-SEC-04
- 4. Conduct meeting with Person in Charge (PIC) MPS-PR-SEC-04
- 5. Mitigate potential hazards encountered during an inspection NFPA 306
- 6. Issue Letter of Determination (LOD) 43 USC 1356(c)
33 CFR 141.5 & 141.15
- 7. Review Facility Security Plan/Alternate Security Plan (FSP/ASP) 33 CFR 106.105
NVIC 05-03/Encl(1)
- 8. Review security records/documents 33 CFR 106.105
NVIC 05-03/Encl (1)
- 9. Inspect security equipment and access control 33 CFR 106.105
NVIC 05-03/Encl (1)
- 10. Review crew knowledge of Facility Security Plan 33 CFR 106.105
NVIC 05-03/Encl (1)
- 11. Examine Annual Inspection Report(s) (CG-5432) - BSEE PINC Z-100 33 CFR 140.103(a)
33 CFR 140.103(c)
- 12. Verify Person in Charge designation 33 CFR 146.5(a)
- 13. Examine station bill - BSEE PINC Z-210 33 CFR 146.130(a)
- 14. Review Emergency Evacuation Plan (EEP) 33 CFR 146.140(a)
33 CFR 146.140(b)
- 15. Verify emergency drill records - BSEE PINC Z-205 33 CFR 146.125(a)
- 16. Verify fire extinguisher inspection and maintenance records 33 CFR 145.01(b)
NFPA 10/7.2.4
- 17. Inspect eye and face protection - BSEE PINC Z-102 33 CFR 142.27(a)
ANSI Z87.1
- 18. Inspect head protection - BSEE PINC Z-102 33 CFR 142.30(a)
33 CFR 142.24(b)
- 19. Inspect foot protection - BSEE PINC Z-102 33 CFR 142.33(a)
33 CFR 142.24(b)
- 20. Inspect protective clothing - BSEE PINC Z-102 33 CFR 142.36
33 CFR 142.24(b)
- 21. Inspect respiratory protection - BSEE PINC Z-104 33 CFR 142.39(a)
ANSI Z88.2
- 22. Inspect fall protection - BSEE PINC Z-106 33 CFR 142.42(a)
ANSI A10.14

- 23. Inspect eyewash stations - BSEE PINC Z-110 33 CFR 142.48
- 24. Examine general housekeeping - BSEE PINC Z-112 33 CFR 142.84
- 25. Inspect deck opening protection - BSEE PINC Z-114 33 CFR 142.87
- 26. Examine lockout-tagout procedures 33 CFR 142.90
- 27. Inspect general alarm system - BSEE PINC Z-195 33 CFR 146.105
- 28. Inspect emergency signals 33 CFR 146.110(a)
- 29. Inspect means of escape - BSEE PINC Z-125 33 CFR 143.101(a) & (b)
33 CFR 143.101(c)
- 30. Inspect lifefloats - BSEE PINC Z-145 33 CFR 144.01-1
- 31. Inspect lifeboat(s) - BSEE PINC Z-145 33 CFR 144.01-15(a)
46 CFR 160.135
- 32. Inspect boat davits/winches 33 CFR 144.01-15(a)
46 CFR 160.132
- 33. Inspect inflatable liferaft installation(s) - BSEE PINC Z-145 33 CFR 144.01-15(a)
33 CFR 144.01-15(d)
- 34. Inspect life preservers - BSEE PINC Z-108 & 150 33 CFR 144.01-20(a)
46 CFR 160.001, .002 & .005,
- 35. Inspect ring life buoys - BSEE PINC Z-155 33 CFR 144.01-25(a)
46 CFR 160.050
- 36. Inspect first-aid kit - BSEE PINC Z-160 33 CFR 144.01-30
- 37. Inspect stokes/safety litter - BSEE PINC Z-165 33 CFR 144.01-35
- 38. Inspect emergency communications - BSEE PINC Z-170 33 CFR 144.01-40
- 39. Inspect work vests - BSEE PINC Z-190 33 CFR 146.20(a)
46 CFR 160.053
- 40. Inspect lifesaving equipment on unmanned platforms - BSEE PINC Z-175 & 180 33 CFR 144.10-1(a)(1)
46 CFR 160.001, .002 & .005
- 41. Inspect man ropes/swing ropes - BSEE PINC Z-125 MSM II/G.5.D.9
D8 INST 16711.1 Item 8(a)
- 42. Inspect portable and semi-portable fire extinguishers - BSEE PINC Z-185 33 CFR 145.01
- 43. Inspect fixed firefighting system(s) 33 CFR Table 145.10(a), Note 1
- 44. Inspect galley fire suppression system 33 CFR 146.15(a)
- 45. Inspect heli-deck perimeter - BSEE PINC Z-140 33 CFR 143.110(b)
- 46. Inspect obstruction light(s) - BSEE PINC Z-120 33 CFR 143.15(a)
33 CFR 67.01-1
- 47. Inspect sound signal(s) - BSEE PINC Z-120 33 CFR 143.15(a)
33 CFR 67.01-1
- 48. Inspect guards and rails - BSEE PINC Z-135 33 CFR 143.110(a)

Examples (not limited to) of non-confined spaces that may pose a hazard:

<u>Non-confined spaces that may pose a risk (All vessel types)</u>	<u>Possible Hazard(s)</u>	<u>Safe Work Practice</u>
CO ₂ Storage Room	O ₂ deprivation due to leaking CO ₂	Ensure proper ventilation, wear O ₂ meter
Machinery Spaces	Noise, Flammability, Toxicity; MSDs – H ₂ S	Hearing protection
Flammable Storage Lockers/Paint Rooms	Flammability, Toxicity	Ensure proper ventilation
Battery Room	Toxicity -	Ensure proper ventilation
Bosun Shop	O ₂ deprivation	Ensure proper ventilation
Workshops	Toxicity from welding fumes, Flammability, Noise	Ensure proper ventilation
Provisions/Non-Flammable Storage	O ₂ deprivation	Ensure proper ventilation
Open Cargo Deck	Flammability	Ensure use of intrinsically safe radios, flashlight, phone, etc.

Examples (not limited to) of confined spaces:

Confined Spaces	Hazard ²⁾
Voids/Cofferdams ¹⁾	P- O; S- F,T
Sealed Compartments ¹⁾	P- O; S- F,T
Double Bottoms/Sides/Duct Keels ¹⁾	P- O; S- F,T
Spaces Coated with a Preservative ¹⁾	P- O; S- F,T
Engine Crankcases/Scavenging Spaces ¹⁾	P- O; S- F,T
Large Heat Exchangers ¹⁾	P- O; S- F,T
Fuel/Lube Oil/Sludge Tanks ¹⁾	P- F,T; S- O
Water tanks ¹⁾	P- O; S- F,T
Cargo/Slop Tanks ¹⁾	P- O; S- F,T
Pump Rooms (if provided) ³⁾	P- O; S- F,T

1) There may be reason to enter one or more of these spaces during the inspection if there are clear grounds to do so, but only enter these spaces after ensuring they are safe for entry. Review the safe work practices contained in MSM Vol. 1, chapter 10, Appendix A for entry into confined spaces other than pump rooms.

**2) Hazards – P (Primary);
S (Secondary);
O (Oxygen Deprivation);
F (Flammability);
T (Toxicity)**

- 49. Inspect personnel landings - BSEE 33 CFR 143.105(a)
PINC Z-130
- 50. Evaluate abandon platform drill - BSEE 33 CFR 146.130
PINC Z-200 33 CFR 146.140(e)(2)
- 51. Issue Deficiencies 46 CFR 2.01-10(a)
- 52. Verify deficiency corrections MSM II/A.2.C.4
- 53. Complete Maritime Information for Safety and Law Enforcement (MISLE) Activity MSM I/12.G.2.a
MISLE User Guide

Section 3: Drills

Abandon Platform Drill:

General alarms / signals	Familiarity with duties	Boat release
Muster lists	Provide equipment	Boat operation
Muster of crew	Familiarity with equipment	Egress procedures
Crew response	Lower lifeboat	Davit-launched liferaft drill
Language understood by crew	Brake operation	Communication w/ control room
Lifejackets	Engine start	Lighting

33 CFR 146.125; 77 FR 70172

Location: _____ Time to Water: _____

Notes: _____

Section 4: Appendices

Confined Space Entry Checklist

Sources for Policy

- COMDTINST M5100.47, Chapter 6, change 11
- MSM Vol. I, Chapter 10 & Appendix A, C, D to chap. 10
- MSM Vol. II Ch-1, Section D, Chapter 6
- 29 CFR 1915, Part B

A Confined Space for the purpose of this checklist is:

A space that possess all of the following three distinct characteristics –

1. Is large enough and so configured that an employee can bodily enter & perform assigned work;
2. Has limited or restricted means for entry or exit; and
3. Is not designed for continuous employee occupancy

Hazards associated with confined space entry

- Oxygen deficient or enriched atmosphere
- Flammable atmosphere
- Toxic atmosphere
- Extreme temperature (hot or cold)
- Engulfment hazard (such as grain, coal, sand, gypsum or similar material)
- Extreme noise
- Slick / wet surfaces & tripping hazards
- Falling objects
- Potential for rapidly changing atmosphere

USCG Confined Space Entry Requirement

A certified Marine Chemist **shall** conduct the initial inspection & certify all confined spaces on merchant vessels “Safe for Workers” before entry by USCG personnel.

In rare circumstances, if a Marine Chemist is not available, the OCMI may designate a USCG Competent Person to certify a confined space “Safe for Workers”