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	bbl/LT	m^3/t	bbl/m^3	bbl/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 (°F = 9/5 °C + 32 and °C = 5/9 (°F – 32))

0	=	-17.8	80	=	26.7	200	=	93.3
32	=	0	90	=	32.2	250	=	121.1
40	=	4.4	100	=	37.8	300	=	148.9
50	=	10.0	110	=	43.3	400	=	204.4
60	=	15.6	120	=	48.9	500	=	260
70	=	21.1	150	=	65.6	1000	=	537.8

Pressure: Bars = Pounds per square inch

1 Bar	=	14.5 psi	5 Bars	=	72.5 psi	9 Bars	=	130.5 psi
2 bars	=	29.0 psi	6 Bars	=	87.0 psi	10 Bars	=	145.0 psi
3 Bars	=	43.5 psi	7 Bars	=	101.5 psi			
4 Bars	=	58.0 psi	8 Bars	=	116.0 psi			

United States Coast Guard

UNINSPECTED TOW VESSEL EXAMINER Job Aid

Name of Vessel	**Flag** ☐ No Change
IMO Number	**Case Number**

Date Completed	**Priority**	**Points**

Location

Vessel Built in Compliance with SOLAS: 60 74 74/78 NA

Port State Control Officer & Examiners

1. _____ **5.** _____

2. _____ **6.** _____

3. _____ **7.** _____

4. _____ **8.** _____

Job Aid UTVE
Rev. Aug 2014

Use of Uninspected Tow Vessel Exam Book:

This examination book is intended to be used as a job aid by Coast Guard uninspected tow vessel examiners during examinations of uninspected tow vessels. Each book contains an extensive list of possible examination items. The depth and scope of the examination must be determined by the marine inspector based on their observations.

This PQS workbook cites SOLAS regulations from the 2009 Consolidated Edition (SOLAS 09). In some cases, the regulations in SOLAS 09 may not apply due to the keel laid date of the vessel. Marine Inspectors must pay close attention to the applicability dates of the SOLAS chapters and regulations when conducting exams to which SOLAS applies.

This document does not establish or change Federal laws or regulations. References given are only general guides. Refer to CFRs, IMO publications, NVIC's, CG-CVC Policy Letters and any locally produced cite guides for specific regulatory references.

NOTE: *Guidance on how to examine domestic vessels can be found in MSM Volume II, Section B: Domestic Inspection Program.*

Guide to Examinations:

Pre-examination Items

- Review MISLE records
- Obtain copies of forms to be issued

Post-examination Items

- Issue letters/certificates to vessel
  - UTV Form 001
- Complete MISLE entries within 48 hours

Notes:

Notes:

Table of Contents:

Section 1: Administrative Items

Involved Parties & General Information:

Owner's Agent
Individual
Phone Number

Charterer's Agent
Individual
Phone Number
☐ Same as Owner's Agent

Owner—Listed on COD or COFR
☐ No Change

Operator
☐ No Change

Notes:

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 <u>After</u> 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-1134 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).

<u>Vessel Information:</u>

Classification Society		
ISM Issuer: Same as above? ☐ Yes ☐ No If not the same, which Recognized Organization? _____ ***NOTE:*** *The period of validity for ISM documents should correspond to the following list. If they do NOT, ISM documents should be further investigated.* ☐ *5 years = Full term (SMS and DOC)* ☐ *12 months = Interim (DOC)* ☐ *6 months = Interim (SMC)* ☐ *5 months = Short term (SMC)*		
Last Drydocking Date	Next Drydocking Date	
Location of Last Drydocking		
Date of Last Class Survey		
☐ Outstanding conditions of class or non-conformities		
Last Port of Call	Next Port of Call	
Method of Construction ☐ I ☐ II ☐ III	Conversions / Modifications	
Call Sign		☐ No Change
Gross Tons		☐ No Change
Built Date (use delivery date)		☐ No Change
Overall Length (in feet)		☐ No Change

<u>Vessel Description:</u>

☐ Passenger Vessel ☐ Ferry

☐ Ro-ro Passenger Vessel ☐ Other _____

Section 3: Examination Items

☐	1.	Research vessel details in MISLE (Marine Information for Safety and Law Enforcement) information system	MSM I/12.G.5
☐	2.	Coordinate examination with vessel representative	MPS-PR-SEC-01
☐	3.	Schedule vessel examination activity in MISLE (Marine Information for Safety and Law Enforcement) information system	MPS-PR-SEC-04 MSM I/12.F
☐	4.	Examine hull markings	46 CFR 67.121
☐	5.	Examine State Registration	33 CFR 173.21 33 CFR 173.23
☐	6.	Examine Certificate of Documentation	46 CFR 67.1 46 CFR 67.7
☐	7.	Examine Load Line Certificate	46 CFR 42.03-5 46 CFR 42.07-45
☐	8.	Examine Merchant Mariner Credentials (MMCs) & Transportation Worker Identification Credentials (TWICs)	46 CFR 10.203(a) 46 CFR 10.203(c)
☐	9.	Verify manning on domestic routes	46 CFR 15.610 46 CFR 15.805(a)(5)
☐	10.	Verify manning on foreign/international routes	SOLAS 09 V/14.1 SOLAS 09 V/14.2
☐	11.	Examine Federal Communication Commission (FCC) documents	47 CFR 80.403
☐	12.	Examine Drug and Alcohol Program	46 CFR 16.401(a) 46 CFR 16.203(a)
☐	13.	Examine Non-Tank Vessel Response Plan (NTVRP)	33 USC 1321 (a)(26) 33 USC 1321 (j)(5)(A)(ii)
☐	14.	Examnine ballast water management documents	33 CFR 151.1510 & .1512 33 CFR 151.2025 & .2035
☐	15.	Examine log(s)for towline for towing astern	33 CFR 164.74(a)(3)(i) NVIC 05-92
☐	16.	Examine Radio Logs	33 CFR 26.03 47 CFR 80.401
☐	17.	Examine equipment maintenance documents/log(s)	33 CFR 164.78(b) 33 CFR 164.80
☐	18.	Examine Garbage Log	33 CFR 151.55(a)
☐	19.	Examine Waste Management Plan & Placard	33 CFR 151.57(a)&(b) CG-CVC Policy Ltr 13-01
☐	20.	Verify firefighting drills and instruction	46 CFR 27.209(a) 46 CFR 27.209(c)
☐	21.	Verify Vessel Security Plan (VSP)	33 CFR 104.120(a)(1) SOLAS 09 XI-2/4.2
☐	22.	Examine security records	33 CFR 104.235(b)(1) SOLAS 09 XI-2/4.2
☐	23.	Examine security equipment	33 CFR 101.310 SOLAS 09 XI-2/6

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

Non-confined spaces that may pose a risk (All vessel types)	**Possible Hazard(s)**	**Safe Work Practice**
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_2S	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
Compressor Rooms [1)]	O_2 deprivation, Flammability	See Note 1
Open Cargo Deck	Flammability	Ensure use of intrinsically safe radios, flashlight, phone, etc.

1) Space is monitored every thirty minutes by gas detection system. Enter these spaces after ensuring these are safe for entry and after ensuring the gas detection system is calibrated and functioning properly and gas levels detected are safe for entry. A marine chemist certificate is not required prior to entry.

Examples (not limited to) of confined spaces on gas carriers:

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) Port State Control Officers should not attempt to enter any of the above spaces during a standard PSC examination, other than pump rooms. There may be reason to enter one or more of these spaces during the exam 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)

☐	24.	Examine international security documents (when applicable)	33 CFR 104.297(b) SOLAS 09 XI-2/4.2
☐	25.	Evaluate crew's knowledge of security plan	33 CFR 104.215(e) ISPS Code A/12.1
☐	26.	Examine Alternative Security Program (ASP)	33 CFR 101.120(b)(3) 33 CFR 104.120(a)(3)
☐	27.	Examine charts and publications	33 CFR 164.72(b)(1) CG-543 Policy Ltr 10-05
☐	28.	Examine radar(s)	33 CFR 164.72(a)(1)
☐	29.	Examine searchlight	33 CFR 164.72(a)(2)
☐	30.	Examine compass/swing-meter	33 CFR 164.72(a)(4)(i) 33 CFR 164.72(a)(4)(ii)
☐	31.	Examine the electronic position-fixing device (GPS)	33 CFR 164.72(a)(6) 33 CFR 164.41
☐	32.	Examine the echo depth-sounding device	33 CFR 164.72(a)(5) SOLAS 09 V/19.2.2.1
☐	33.	Examine Automated Identification System (AIS)	33 CFR 164.46(a)(3)(ii)
☐	34.	Examine radiotelephone	33 CFR 26.03(a)(3) 47 CFR 80.955
☐	35.	Examine navigation lights and dayshapes	46 CFR 25.10-3 ABYC A-16
☐	36.	Examine sound signaling device(s)	33 CFR 83.33(a) (Rule 33) 33 CFR 83.33(b) (Rule 33)
☐	37.	Inspect Emergency Position Indicating Radio Beacon (EPIRB)	46 CFR 25.26-20(a) 46 CFR 25.26-20(b)
☐	38.	Examine ring life buoy	46 CFR 25.25-5(d)
☐	39.	Examine life jackets	46 CFR 25.25-5
☐	40.	Examine work vest(s)	46 CFR 26.30-1
☐	41.	Examine immersion suits	46 CFR 25.25-5(e)
☐	42.	Examine portable firefighting extinguishers	46 CFR 27.303 & .305 46 CFR 25.30-20
☐	43.	Examine semi-portable firefighting extinguishers	46 CFR 27.303 & .305 46 CFR 25.30-10 & .30-20
☐	44.	Examine high pressure CO2 systems	46 CFR 27.303 & .305 46 CFR 76.15
☐	45.	Examine clean agent fire suppression system	46 CFR 27.303 46 CFR 27.305
☐	46.	Examine fire detection system	46 CFR 27.203
☐	47.	Examine internal communications	46 CFR 27.205(b) 46 CFR 27.205(c)
☐	48.	Examine general alarm system	46 CFR 27.201(a)(1)
☐	49.	Examine backfire flame control on gasoline engine(s)	46 CFR 25.35-1(a) 46 CFR 25.35-1(b)
☐	50.	Examine bilge ventilation for gasoline engine(s)	46 CFR 25.40-1(a)
☐	51.	Examine fuel shut off valves	46 CFR 27.207

☐	52.	Examine fuel systems	46 CFR 27.211
☐	53.	Examine portable fire pump and equipment	46 CFR 27.301(e)
☐	54.	Examine fire main and fire pump	46 CFR 27.301 SOLAS 09 II-2/10.2.2.2.2
☐	55.	Examine fire stations	46 CFR 27.301(c)
☐	56.	Examine terminal gear - towing astern	33 CFR 164.74(b)(1) NVIC 05-95
☐	57.	Examine towline and terminal gear - towing alongside & pushing ahead	33 CFR 164.76(a) 33 CFR 164.76(b)
☐	58.	Examine transfer hose(s)/piping, fittings and containment	33 CFR 154.500(a)
☐	59.	Examine oil transfer procedures and pollution placard	33 CFR 155.720 33 CFR 155.730
☐	60.	Examine Marine Sanitation Device (MSD)	33 CFR 159.7(a)(1) 33 CFR 159.7(a)(2)
☐	61.	Conduct MARPOL Annex VI Survey	40 CFR 1043.30(c) MARPOL VI/13.8
☐	62.	Issue deficiencies	MSM II/A.2.C.4.b MPS-PR-SEC-05
☐	63.	Complete MISLE Activity	MSM I/12.G.2.a MPS-PR-SEC-05
☐	64.	Verify deficiency corrections	MSM II/A.2.C.4

Section 5: Appendices

Confined Space Entry Checklist

Sources for Policy

- COMDTINST M5100.47,Chapter 6, change 11
- MSM Vol. 1, Chapter 10 & Appendix A, C, D to chap. 10
- MSM Vol. 2 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”