

SOP-EMMA-004 Confined Space Entry

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1.0 Introduction

This SOP is a supplement to the general confined space entry SOP.

The regulations governing confined spaces and entry on a US Flag Uninspected Research Vessel are different that those required of a SOLAS vessel. There are no routine or at sea activities or crew qualified inspections or servicing that require crew entry into the confined spaces on the R/V Emma McCall.

Since the vessel carries no equipment or individuals qualified to measure the atmosphere, the company policy for confined space entry is consistent with 46 CFR 148.86 (a) – it is prohibited at sea except in an emergency.

In an emergency and consistent with the Master's authority including not to be constrained by the company, ship owner, or charterer from making decisions that are in his or her professional judgment necessary for the safe operation of the *v*essel, 46 CFR 148.86 (b) is the controlling regulation and procedure.

2.0 Definitions

<u>Responsible person</u> (46 CFR 148.3) means a knowledgeable person who the Master of a vessel or owner or operator makes responsible for all decisions relating to his or her specific task.

<u>Trained Person</u> (46 CFR 148.48(a)) means a person having received documented training in the use of SCBA (for instance STCW VI/1 or VI/3), and at minimum having completed the Confined Space Training course on the Computer Based Training.

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<u>Wire rope safety line</u> is the safety line from outside the confined space and attached to the entrant.

<u>Line Tender/ Attendant</u> means the person assigned to tend the safety line from outside the confined space and monitor the entrant. STCW VI/1 or VI/3 would qualify as appropriate training.

3.0 References

29 CFR 1915 - Subpart B - Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment

46 CFR 148.86

"§148.86 Confined space entry.

- (a) **Except in an emergency**, no person may enter a confined space unless that space has been tested to ensure there is sufficient oxygen to support life. If the oxygen content is below 19.5 percent, the space must be ventilated and retested before entry.
- (b) **In an emergency**, a confined space may be entered by <u>a trained person</u> <u>wearing self-contained breathing apparatus</u> (SCBA), suitable protective clothing <u>(PPE)</u> as necessary, and a wire <u>rope safety line tended by a trained person</u> outside the hold or in an adjacent space. Emergency entry into a confined space must be <u>supervised by a responsible person</u> as defined in §148.3 of this part."

4.0 Confined Spaces Register

A HAZID has been conducted and confirmed the following as the only confined spaces on the R/V Emma McCall. The entrances to all confined spaces shall be clearly marked with signage or painted to indicate "Confined Space- No Entry".

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Confined Spaces Register – MISS EMMA MCCALL

SPACE	CATEGORY 1			
Forepeak ballast tank	1			
#1 port and starboard ballast tanks	1			
#2 port and starboard ballast tanks	1			
#3 port and starboard ballast tanks	1			
#4 centerline ballast tank	1			
Aft Peak port and starboard ballast tanks	1	NO ENTRY		
Fuel Day tanks port and starboard	1	NO ENTRY		
#1 port and starboard double bottom fuel tanks	1	except in an emergency		
#2 port and starboard double bottom fuel tanks	1			
Lube oil tanks port and starboard	1			
Hydraulic oil tanks	1			
Dirty oil tank port and starboard	1			
Sewage Holding Tanks	1			
Potable Water Tanks port and starboard	1			
SPACE	C	CATEGORY 3		
Chain locker port and starboard	3	3 No permit required		
#1 port and starboard Storage tanks	3			
#2 port and starboard Storage tanks	3			
Rope locker	3 to enter			
bilges below the deck plates and the bow thruster room	3			

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4.1 Entry at Shipyard, Dockside or Repair Facilities

Once an area identified as a confined space area is designated for possible entry, then the potential hazards associated with that space must be identified. Confined space hazards may be categorized as oxygen deficient atmospheres, flammable atmospheres, toxic atmospheres and mechanical/ physical hazards.

For this reason, any person with a potential need to enter a confined space under permit issued conditions must be trained in recognizing these hazards. At a minimum, they must have completed the Confined Space Training course on the computer based training. All relevant TDI-Brooks employees, i.e. ship's crew and survey party are required to complete this training.

Entries into permit required confined spaces in a shipyard or repair facility will be done under the control and authority of **the Contractor/ Facility's** safety program consistent with the requirements of 29 CFR 1915.

Before anyone may enter a permit-required confined space, a certified Marine Chemist or equally authorized person from the repair facility must have tested the atmosphere and posted a certificate at the outside of the space stating it is safe for entry. All entrants will inspect the certificate before entering to ensure it is still current and valid. Actual entrants will be limited to only those who meet the requirements of 29 CFR 1915.12 (d) and (e).

4.2 Emergency Entry Procedure

Emergency entry must follow the requirements of 46 CFR 148.86 (b) and requires four people trained in confined space entry to fill the following roles:

Supervisor- A Responsible Person must supervise the entry and maintain communications with the bridge.

The **Entrant** must:

- be trained in the use of an SCBA
- wear an SCBA and a wire rope lifeline attached to him/ her
- wear appropriate protective clothing and other applicable PPE

The Attendant/ Line Tender must:

- remain outside the confined space to monitor the entrant
- have agreed on some means of communication with the entrant

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The **Standby Rescuer** must:

• remain outside the confined space with full SCBA gear and wire rope lifeline on and ready to enter the space to assist the entrant.

5.0 Training and Drills

All persons participating in emergency confined space entry or rescue drills must have completed the computer-based training course as a general familiarization of the hazards of confined space.

The drill scenarios serve as additional training, since this is where we can learn the most about potential complications.

In these drills, <u>all the steps of the process</u> – from planning the emergency scenario to setting up rescue equipment to wearing the appropriate PPE, retractable lifelines and SCBA gear – will be followed **up to the point of entry without actually entering the space.**

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