

Safety Alert

Number: 18-21

Published: 31/08/2018

Subject: Contaminated Slops – High LEL

What Happened / Narrative

An Offshore Support Vessel (OSV) was asked to backload 650bbls of contaminated mud (Slops) from an offshore location into two designated mud tanks. As per industry practice, the Master requested up to date MSDS Information for the cargo along with a completed analysis report. This was duly received and compared with the safety parameters and guidance provided in GOMO Appendix 10-F.

The completed analysis form provided by the offshore location showed all results to be within limit and stated that the slops had been “treated with caustic, biocide and H2S scavenger to avoid degradation of water component”

Based on the information provided the Master was satisfied that the slops were safe for carriage and agreed to accept.

The transfer was completed without incident and the OSV released back to port.

Prior to discharging the slops and as per industry practice, the Surveyor began his pre-transfer checks with the Chief Officer and took a sample of the tanks atmosphere through the cargo tank vent head. The first tank atmosphere gave a reading of 100% LEL (Flammability), the procedure was repeated in the second tank which gave the same reading. Chief Officer immediately informed the Master and verified the atmosphere readings with the ships own gas meters which matched the Surveyors readings. Although the exact gas compound was not known, the readings indicated that the tank atmosphere was potentially within the flammable envelope and therefore volatile. The Master duly informed the Emergency Out of Hours Contact, Base Operator, Charterers Emergency Response and Harbour Authority.

Corrective Actions Taken / Recommendations

- The Master initiated safety precautions in line with (Methanol) LFL Checklists and Methanol Handling Manual to protect the crew and reduce the likelihood of ignition.
- The Base Operator arranged for a sample of the contaminated slops to be taken and sent ashore for immediate analysis with the following results:

	Initial MSDS Data & Analysis Results	Guideline / Acceptable Parameters	Follow-up Analysis onshore
Flash Point	>90°C	>60°C	40°C
Gas Test (LEL)	0%	<25%, ideally zero	100%

- The Master correctly identified the need for further precautions while the unknown entity remained onboard and along with Bulk Surveyors, Base Operators and Tank Cleaners were able to devise a suitable risk assessment and procedure for safe discharge and handling of the cargo utilising the available equipment onboard and additional gear provided by 3rd Party.
- The OSV’s onboard Inert Gas System was used to create a nitrogen blanket into the tank to control the flammable atmosphere until a satisfactory reading was given. Persons in BA were then able to approach and rig intrinsically safe pumps to safely discharge the slops while continuing to monitor and manage the atmosphere.
- On completion, all lines and manifolds were flushed and tanks cleaned by BA Wearers to the satisfaction of all parties.
- All relevant OSV personnel are to ensure they are aware of and following the good practice for backloading of wet bulks contained within GOMO.

A full investigation is ongoing.

The information contained within this Safety Alert and the associated MSF web site is provided in good faith for the benefit of our members and does not constitute and is not intended to constitute professional advice or any form of formal representation on behalf of any MSF member or officer. The text as provided by submitting organisations may be amended to ensure that it is brief, informative and readable but will as far as reasonably practicable remain as per the intent of the original submission. For the avoidance of doubt, no liability whatsoever shall be attached to any guidance, recommendation or statement contained therein. Contents should be reviewed individually by recipients who will determine relevance to their own operations.

Safety Alert

Photographs / Supporting Information

Guidance contained within GOMO at Appendix 10-F as well as MGN 283 dictates that the Master must not accept the loading of any cargo which is not safe for cargo handling or not properly documented. The back-load hose should not be sent to the OSV and connected unless there is agreement between the OSV Master and the Installation OIM that the back load is safe and acceptable for transportation.

The responsibility for ensuring that cargoes are properly prepared for carriage on board OSVs rests with the operator, ship and/or owner of the cargoes concerned. In this case, the information provided to the Master was inaccurate which resulted in a potentially explosive atmosphere and dangerous environment onboard.

Further Guidance on the back-loading of Wet Bulk Cargoes is available from the recently revised appendix 10-F of GOMO which can be found, along with the relevant "Backload & Analysis Form" at www.g-omo.info

The recent revision of this guidance now means that the same good practice previously applied to back-loading of slops now applies to **all Wet Bulk** which is to be back-loaded to an OSV and could potentially contain high LEL readings.