



## **Singapore bunkers – presence of chlorinated hydrocarbons**

Gard Members and clients are reporting operational problems that may be caused by contaminated bunkers, mostly HSFO, stemmed in Singapore in the first quarter of 2022.

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We refer to Veritas Petroleum Services' (VPS) Alert No. 05/2022 dated 11 March 2022 reporting that high levels of chlorinated hydrocarbons have been noted in fuel samples of HSFO deliveries from Singapore. While the deliveries were made by different suppliers during this time, the ISO 8217, Table 2 test requirements were met. The presence of contaminants was found during enhanced testing - GC-MS (Gas Chromatography- Mass Spectrometer), which revealed chlorinated hydrocarbons and organic chlorides. Gard Members can access the VPS Alert [VPS Bunker Alert 5-2022 Chlorinated hydrocarbons in Singapore.pdf](#) .

VPS advises that the consequences of such contamination include worn out fuel pumps, fuel valve problems and subsequently the main or auxiliary engines failing to start. Gard insured vessels have experienced operational issues that may be related to contaminated stems including blackouts, loss of propulsion, high exhaust temperature deviation and excessive sludging in the fuel system. In some cases, the vessels even required a tow to port. The long terms effect of these contaminants on the machinery, if any, are not yet known.

Subsequent to the VPS alert, Gard also contacted other industry organizations to ascertain if they have had similar experiences. We have not received feedback at the time of drafting this alert although we have been made aware that a number of testing laboratories have published client alerts on this issue that corroborate the VPS findings. We would like to mention that these findings do not reflect the overall quality of bunkers supplied in Singapore.

Given that Gard has experienced a few severe cases of main engine breakdown, we would reiterate some of the recommendations in the VPS alert as well as Gard's previous advice on additional testing mentioned in our Insight ["Contaminated bunker issue continues to spread"](#) which related to the spate of contaminated bunkers originating in Houston in 2018 and 2019.

## **Key recommendations**

1. Ship's crew on vessels that have recently stemmed HSFO bunkers in Singapore should be aware of the possible presence of chlorinated hydrocarbons and the potential effects on the vessel operation. Before using the fuel, owners, operators and charterers may consider seeking assurances from the supplier that the fuel has been tested for chlorinated hydrocarbons and request documentation of the results. At this time, the affected fuel seems to be limited to HFSO, that is, fuel that is intended for consumption by vessels fitted with scrubbers in order to comply with MARPOL sulphur emission standards. This alert does not apply to distillates.
2. Owners and managers should consider arranging for testing of samples taken before and after the fuel treatment plant to gauge the fuel oil quality at the engine inlet. This will indicate whether the purification system is functioning optimally. It could give early indications of increased engine wear-and-tear and will assist in resolving fuel quality disputes.
3. On testing requirements for manifold delivery samples, owners and managers can consider ordering investigative analysis, beyond what is required as per Table 2 of ISO 8217, especially when the vessel is experiencing operational issues. Advanced tests such as GC-MS may help to identify contaminants that could cause damage to the main or auxiliary engines.
4. Owners and charterers should be aware that bunker supply contracts contain various time limits and methods for notification to the bunker provider of problematic fuel. The purchaser should review the bunker sale contract terms and conditions carefully and provide timely notice of operational problems that may be related to the fuel supplied.
5. Having a constructive dialogue with the bunker suppliers before taking on bunkers to discuss the concerns related to the possible presence of chlorinated hydrocarbons in HSFO can also yield positive results.
6. Lastly, bunker samples taken at the time of delivery will be relevant evidence that may help to resolve a dispute between owners and charterers regarding the compliance of the fuel supplied as well as between seller and purchaser under the bunker sale contract. For more information please refer to our [alert](#) and [Gard Poster Fuelsample LowRes.pdf](#) on bunker sampling.

\*We would like to thank Veritas Petroleum Services for the information. \*

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