



EFOA Code of Best Practice / One year on

Next steps towards further reduction of spikes

OCTOBER 2009



The European Fuel Oxygenates Association

Keep up the Good Work



In March 2008 the European Fuel Oxygenates Association (EFOA) launched its code of best practice for transporting fuel ethers by barge (MTBE/ETBE Transport over inland waterways, http://www.efoa.org/docs/COP_EN.PDF).

The code of practice, designed with the input of the barge industry, was aimed at barge and oil logistics personnel. Its purpose was to minimise product residues.

Since 2003 a distinctive number of short-term concentrations of MTBE had been found in the Rhine which last for 12 - 24 h with concentrations from a few $\mu\text{g/l}$ up to 60 - 70 $\mu\text{g/l}$. Similar "spikes" were also detected for ETBE from the end of 2005, following its more widespread use. Research by EFOA suggested that a combination of liquid and vapour residues in barges were the most likely source of the spikes.

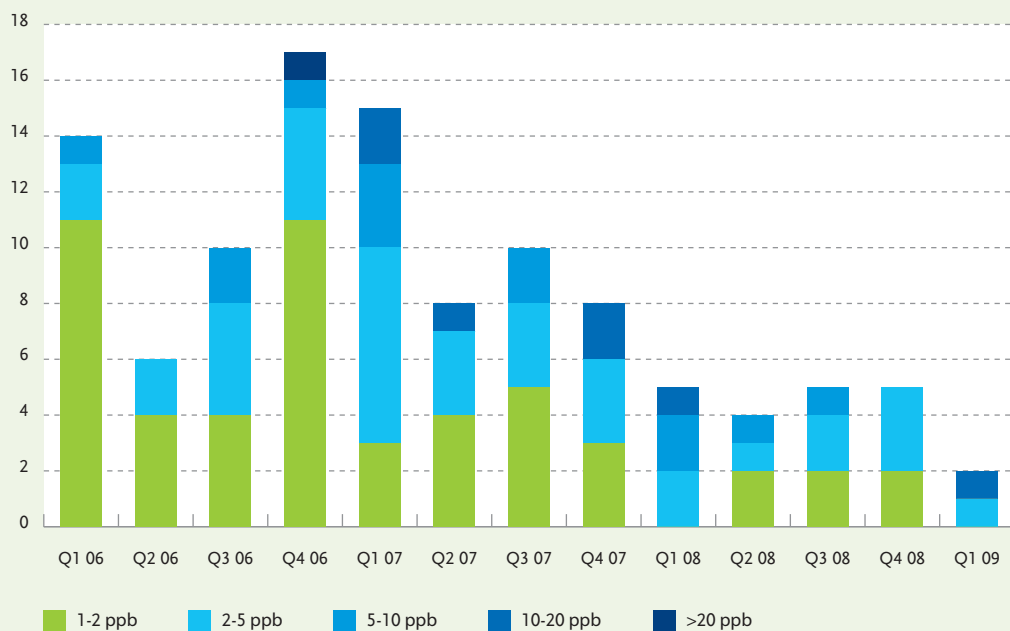
EFOA sought to raise awareness of the need for correct product handling via workshops with its member companies and the barge industry.

The code of practice was a further attempt to inform producers and refineries, the users of the substances, of the need to fully brief their logistic partners with regard to suitable quality assurance systems. By so doing they would help guarantee that inappropriate handling of transported substances was avoided.

As can be seen from the chart below there has been a steady decline in the number of spikes occurring in the Rhine since the introduction of the code of practice.

Spike analysis Rhine

Number of peaks per quarter



Whilst this is encouraging, EFOA believes that continued efforts to improve product handling are required if further decreases are to be achieved.

After careful review of the code of practice EFOA believes that the key area where improvement could be made is in barge selection.

As regards barge selection EFOA would like to suggest that producers and consumers of ethers consider the following options for enhancing their quality assurance systems.

- **Firstly** greater control over the types of barges used to transport ethers may be achieved by taking full control of the logistics chain. Companies should therefore think about what terms and conditions of sale would best deliver adequate control. For example when the river level is low double hulled barges offer additional security in the event of a minor accident.
- **Secondly**, implementing a policy of dedicated barges for ether shipments will also bring benefits. Not only will it minimise product residues by eliminating the need for cleaning and degassing, it will reduce the number of personnel along the supply chain who handle ethers thus allowing for greater levels of training.
- **Thirdly**, stricter requirements for the correct storage and disposal of product residues are applied to barges whose slop tanks are authorised to accept loading residues. Better control of product residues must inevitably lead to fewer spikes. Therefore transporting ethers using barges with authorised slop tanks seems like something that should be encouraged.
- **Finally** we would like to remind everyone that the best way to avoid peaks is to minimise product residues. Ensuring unloading facilities have the ability to fully use the efficient stripping system of barges, especially double hulled, is an important element in achieving this. As is receivers ensuring sufficient time and tankage is available to achieve complete unloading.

Measures adopted to further decrease the frequency of spikes may include part or all of the above mentioned suggestions or any other measures.

EFOA very much appreciates the good cooperation that it has received from the barge and oil industries in trying to tackle this issue. We acknowledge that they have been the major contributors to the reduction in the frequency of spikes. EFOA therefore would like to say “**thank you**” and “**keep up the good work**”.

FOR MORE INFORMATION

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EFOA

EUROPEAN FUEL OXYGENATES ASSOCIATION

- Founded in 1985, EFOA is a non-profit, technical organization.
- Its role is to represent the European Fuel Ether industry in a wide variety of technical and government initiatives.
- EFOA is recognized by the European Commission as a stakeholder on fuel quality and biofuels.
- We have 11 members representing the majority of the European ether capacity:



Our Mission

EFOA is dedicated to the promotion of ethers as fuel components towards a cleaner and sustainable future.



The European Fuel Oxygenates Association

EFOA represents the fuel ether producers in Europe.

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EFOA is a sector group of Cefic,
the European Chemical Industry Council.