11TH INTERNATIONAL CONFERENCE ON STABILITIY, HANDLING AND USE OF LIQUID FUELS October 18-22, 2009 Prague, Czech Republic

STRATEGIES FOR RESOLVING PROBLEMS CAUSED BY MICROBIAL GROWTH IN TERMINALS AND RETAIL SITES HANDLING BIODIESELS

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Adding fatty acid esters, such as FAME, to mineral diesel, has produced in Europe an environment in which microbial growth can be prolific, at every stage in production, storage and distribution, and particularly at retail premises and in end users' vehicles. The chemical and physical factors which are stimulating this prolific growth will be discussed with reference to our extensive experience in laboratory analysis of biodiesel samples and investigation of operational problems on site. The paper will consider the influence of water content and water activity and its behavior in biodiesels. We will discuss observations on the types and distribution of microbes found in biodiesel tanks. Many blenders and suppliers of B5 have adopted excellent preventive monitoring and control strategies, with proper regard to minimal impact on facilities downstream. These strategies are currently tailor-made but they are adaptable, and the tools for monitoring and treatment are widely available. There is still some way to go to develop safe and reliable strategies for vehicles and retail sites and possible options will be considered.