

Title: Safeguards: A key process safety tool in jet fuel management from refinery to aircraft wings

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Abstract: Emphasis on aviation safety and the drive for an industry safety revolution sadly came as an aftermath of several aircraft accidents and fatalities. In Nigeria alone, 112 aircraft crashes were recorded from 1939 to 2015. Safety concerns in the Nigerian aviation sector reached a peak in 1996 when within 2 years; seven air crashes with hundreds in fatalities, were recorded. This led to several industry reviews, regulations and operational status appraisal resulting in the closure and abandonment of the only 94 km hydrant jet fuel pipeline from Atlas Cove via Mosimi to Lagos Airport, by the Government in 1996 to this day. This paper critically examines the improvements in practice, and the jet fuel safety and quality management systems currently in place as at 2017, for the handling of jet fuel toward ensuring on-spec jet A-1 fuel with a focus on Lagos aviation fuel operations. The findings show that different forms of safeguards have been deployed along the jet fuel value chain to maintain product quality and ensure flight safety, but there are rising concerns that the industry may relapse on safety due to the current economic recession.

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