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Chapter 19.5
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EI Hydrocarbon Management
HM 65

Atmospheric hydrocarbon emissions from marine vessel transfer operations

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Atmospheric hydrocarbon emissions from marine vessel transfer operations

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Foreword

This publication was prepared jointly by the American Petroleum Institute Committee on Petroleum Measurement and the Energy Institute Hydrocarbon Management Committee. This standard supersedes API Publication 2514A, Second Edition, September 1981, which is withdrawn. See A.1 for more information on the previous editions of this document.

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1 Scope

This standard provides methods for estimating evaporative loss from marine vessel transfer operations. Specifically, this standard addresses:

1) loading stock into:

    a) ship or ocean barges, or

    b) shallow draft barges, and

2) loading ballast water into ship or ocean barges from which crude oil has been unloaded.

The emission estimates are for uncontrolled loading operations and do not apply to operations using vapor balance or vapor control systems or ballasting of ships with segregated ballast tanks.

This standard does not address evaporative loss for:

1) very large crude carriers (VLCCs) or ultra large crude carriers (ULCCs) (unless the saturation factor K_S is determined);

2) marine vessels employing crude oil washing (see 3.3.1);

3) marine vessel transit loss;

4) loading ballast water into marine vessels that, prior to dockside unloading, held anything other than crude oil (unless the saturation factor K_S is determined); or

5) unloading marine vessels.

This standard supersedes API 2514A, Second Edition, September 1981, which is withdrawn.

2 References

[1] American Petroleum Institute, *Recommended Practice for Specification of Evaporative Losses*, *Manual of Petroleum Measurement Standards*, Chapter 19, Section 4, Second Edition, September 2005

[2] American Petroleum Institute, Publication 2524, *Impact Assessment of New Data on the Validity of American Petroleum Institute Marine Transfer Operation Emission Factors*, July 1992

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[4] Spectrasyne Ltd., “Studies of VOC Emissions from External Floating Roof Tanks and Barge Loading—November 1993,” Spectrasyne Report No. TR9413, prepared for CONCAWE, Brussels, Belgium, June 13, 1994

[5] CONCAWE, “VOC Emissions from External Floating Roof Tanks: Comparison of Remote Measurements by Laser with Calculated Methods,” CONCAWE Report No. 95/52, January 1995