Assessment of Monitoring Plans & Verification of Emissions Reports under the EU MRV Regulation

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Regulation (EU) 2015/757 on the monitoring, reporting and verification of carbon dioxide emissions from maritime transport came into force on 1 July 2015.

Which ships are concerned by the EU MRV Regulation?
- Ships of 5000 GT and above regardless of Flag or country of ownership
- Calling at an EU port from 1 January 2018
- And carrying cargo or passengers for commercial purposes

As the accountable entity, the ship must:
- Develop its own Monitoring Plan and have it assessed
- Monitor and report its emissions and activity data
- Have its Emissions Report independently verified
- Carry on-board a Document of Compliance (DOC)

Which voyages must be reported?
- A Port of Call is a port where a ship stops to load or unload cargo or to embark or disembark passengers
- A voyage is a journey between two consecutive Ports of Call
- A reportable voyage is a voyage where at least one Port of Call is in the EU
Data to be monitored for each voyage

- Fuel consumption at sea
- Fuel consumption at berth
- Time at sea
- Distance sailed
- Cargo on-board
- Transport work
- Energy efficiency parameters

Monitoring methodologies
- Method A: Bunker fuel delivery note (BDN) and periodic stocktakings of fuel tanks
- Method B: Bunker fuel tank monitoring on-board
- Method C: Flow meters for applicable combustion processes
- Method D: Direct CO2 emission measurements

Emission sources to be considered
- Main engines
- Auxiliary engines
- Boilers
- Gas turbines
- Inert gas generators

Monitoring Plan structure
- Identification of ship and shipping company/shipowner
- Identification of emission sources
- Description of procedures for monitoring voyages, fuel consumption and activity data
- Methodology for data gaps
- Procedures for quality control
- Description of data flows
- Identification of responsibilities

Emission factors

<table>
<thead>
<tr>
<th>Type of Fuel</th>
<th>IMO Values 2012/63</th>
<th>rt CO2/t fuel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy Fuel Oil</td>
<td>3.114</td>
<td></td>
</tr>
<tr>
<td>Light Fuel Oil</td>
<td>3.151</td>
<td></td>
</tr>
<tr>
<td>Diesel/Gas Oil</td>
<td>3.206</td>
<td></td>
</tr>
<tr>
<td>Liquefied Petroleum Gas [Propane]</td>
<td>3.000</td>
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</tr>
<tr>
<td>Liquefied Petroleum Gas [Butane]</td>
<td>3.030</td>
<td></td>
</tr>
<tr>
<td>Liquefied Natural Gas</td>
<td>2.750</td>
<td></td>
</tr>
</tbody>
</table>

The MRV process


Drafting Monitoring Plan  Assessment of the Monitoring Plan  Monitoring of fuel consumption, CO2 emissions & transport work  Reporting of fuel consumption, CO2 emissions & transport work  Issuance of Verification Opinion Statement  Submission of verified information to Commission & Flag State  Document of compliance issued  Document of compliance kept on-board the ship

Responsibilities

- Shipping Company
- Verifavia Shipping

Key Dates
- 31.08.2017: Final date to submit Monitoring Plan to verifier
- 01.01.2018: Start of 1st Reporting Period
- 31.12.2018: End of 1st Reporting Period
- 30.04.2019: Final date to submit verified Emissions Report to Commission and Flag State
- 30.06.2019: On-board Document of Compliance

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Monitoring Plan Assessment
6 steps to become MRV Compliant

Aim of assessment is to check consistency between EU MRV Regulation, Monitoring Plan and existing company procedures

- Completeness
- Accuracy
- Relevance
- Conformity
Verifavia Shipping provides its customers with an Extranet to facilitate exchanges during the assessment of Monitoring Plans (voluntary and at no extra cost)

Extranet for EU MRV Monitoring Plans assessment by Verifavia Shipping

This Extranet is available for shipowners and management companies who have a legal agreement in place with Verifavia Shipping for the assessment of the Monitoring Plans (MPs) required by the Regulation 2015/757 on the Monitoring, Reporting and Verification of carbon emissions of large ships visiting EU ports for commercial purposes (EU MRV).

The aim of this Extranet is to facilitate the exchanges of information, documents and data between the shipping companies and Verifavia Shipping as part of the legal assessment audit.

Legal submission deadline is 31 August 2017.

In practice, we will conduct the Monitoring Plan assessment audit in three main phases
Audit conducted with an on-site visit at company’s head office and / or remotely through email communication and conference calls.

PHASE 1
- Contract review
- Legal agreement
- Audit preparation
- Assessment plan

PHASE 2
- On-site visit at Head Office (if required)
- Interviews with key staff
- Review of documents
- Observation of IT systems & key processes

PHASE 3
- Issues Log
- Independent Technical review
- Assessment report

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Verifavia is a global, independent and accredited environmental verification, certification and auditing body for aviation, airports and maritime transport.

**Our vision**
To be the maritime industry’s first choice for the provision of efficient, competitive and flexible emissions verification services worldwide.

**Our Mission**
We work hand in hand with ship owners and operators to help them successfully navigate the requirements of the EU MRV Regulation, and achieve compliance in a timely and cost-effective manner.

**Our Approach**
By combining our innovative approach and streamlined procedures with the technical expertise and industry knowledge of our team, we provide a top-of-class service that ensures our customers experience a smooth verification journey.

**Our Services**
- Assessment of EU MRV Monitoring Plans
- Verification of EU MRV Emissions Reports
- Certification of EU MRV IT Systems
- EU MRV Technical Workshops & Webinars
- Clean Cargo Working Group (CCWG) Verification
**Our Accreditation**

- Verifavia is fully accredited to **ISO 14065** by both **UKAS** and **COFRAC** to conduct EU MRV assessment and verification audits for ships under the EU MRV Regulation.
- Verifavia is the first and only global EU MRV verifier with double accreditation.
- These accreditations allow Verifavia to assess and verify any ship anywhere in the world, regardless of Flag, country or class.

Verifavia is an active member of the European Commission’s expert groups on MRV, which ensures we are influencing the technical details of the Regulation and constantly up-to-date on regulatory developments.

**Why choose Verifavia Shipping?**

- The world’s first and only doubly accredited verifier
- Flexible, efficient, competitive & innovative
- Specialised services with dedicated expertise
- Multi-lingual & global services
- Extranet for online assessment of MPs
- Truly independent verification services
- Recognized EU MRV expert in global shipping media
- Task leader of Commission’s task force on verification

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**Our Global Presence**