Title	**Manage marine engineering systems aboard a deep-sea commercial seafood vessel**		
Level	**7**	**Credits**	**50**

Purpose	People credited with this unit standard are able to: explain marine engineering regulatory environmental factors to be considered when managing marine engineering systems aboard a deep-sea commercial seafood vessel; monitor marine engineering system performance; analyse causes and consequences of performance anomalies; and select and carry out actions to correct performance anomalies.

Classification	Seafood > Seafood Vessel Operations

Available grade	Achieved

Prerequisites	Open.

Guidance Information

1 Legislation relevant to this unit standard includes but is not limited to – Ozone Layer Protection Act 1996; Health and Safety at Work Act 2015; Resource Management Act 1991 and local bylaws; Maritime Transport Act 1994, Maritime Rules and Marine Protection Rules, and advisory circulars issued under the Rules.

2 *Company requirements* refer to instructions to staff on policy and procedures that are communicated in a verbal or written form. These requirements must include legislation requirements and company safety procedures, and may include but are not limited to, industry codes of practice and standards.

3 Definitions
Classification Society means a society recognised by the International Maritime Organisation for the purpose of setting standards for the construction, maintenance, inspection, and quality management of vessels, and classifies vessels according to the standard maintained.
Manage means to operate, maintain, and diagnose and correct system faults within the requirements of New Zealand and international law, the relevant Classification Society, the charter and/or owner company, and the Master of the vessel.
Marine engineering systems include but are not limited to: propulsion, steering, emergency services, electrical, fluid power, boiler, refrigeration, fuel and ballast management, electronic and control.

Outcomes and performance criteria

Outcome 1

Explain regulatory environmental factors to be considered when managing marine engineering systems aboard a deep-sea commercial seafood vessel.

Range legislation, Classification Society requirements.

Performance criteria

1.1 The explanation includes the regulatory environment in terms of the Classification Society requirements.

Range hull, propulsion system, steering system, electrical system, bilge and pumping system, tanks, boilers.

1.2 The explanation includes the regulatory environment in terms of the protection of the marine environment while the vessel is at sea and alongside.

Range oily water separators; black and grey wastewater, bilge, and oil discharges and transfers; bunkering; smoke discharge; accidental oil spills.

1.3 The explanation includes the regulatory environment in terms of the Maritime Rules requirements.

Range logging and reporting requirements, manning, refrigeration system, emergency response systems, fuel system, machinery condition, accidents, emergency drills.

Outcome 2

Monitor marine engineering system performance.

Performance criteria

2.1 Monitoring activities establish the degree of conformity between actual and expected system performance.

Range direct monitoring of system and instrumentation, scrutiny of electronic and hard copy performance data.

2.2 Time is allocated among monitoring activities in accordance with the company requirements.

2.3 Monitoring activities are documented in accordance with company and regulatory requirements.

Outcome 3

Analyse causes and consequences of performance anomalies.

Performance criteria

3.1 Causes of performance anomalies are identified from all available data.

Range engine performance, refrigeration systems, hydraulic and pneumatic systems, steam systems, electrical and electronic systems, bilge systems, domestic systems.

3.2 The consequences of performance anomalies are analysed in terms of output quality, operational efficiency, and safety.

Range operational efficiency may include but is not limited to – fuel consumption, product processing and quality, waste control; safety includes – plant, product, personnel.

Outcome 4

Select and carry out actions to correct performance anomalies.

Range actions – adjust, report, organize, or carry out repair and/or replacement, reschedule planned maintenance.

Performance criteria

4.1 Selected corrective actions resolve the identified anomalies and meet company requirements for cost-effectiveness.

4.2 Corrective actions are carried out in accordance with company requirements, and within delegated authority.

4.3 Recommendations for improvements are communicated in accordance with company requirements.

Range improvements to – operational procedures, monitoring procedures.

Planned review date	31 December 2028

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	21 February 2005	N/A
Review	2	19 September 2008	N/A
Rollover and Revision	3	29 February 2024	N/A

Consent and Moderation Requirements (CMR) reference	0123

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

Comments on this unit standard

Please contact the Muka Tangata - People, Food and Fibre Workforce Development Council qualifications@mukatangata.nz if you wish to suggest changes to the content of this unit standard.