

## QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR LOGISTICS SECTOR

### What are Occupational Standards(OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

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### Introduction

#### **Qualifications Pack: Vessel Operator Grade 3** *(Electives – Near Coastal Vessel Operations/ Tug Vessel Operations /Passenger Vessel Operations)* *(Options – Ship and Yard Planning)*

**SECTOR:** LOGISTICS

**SUB-SECTOR:** Inland Waterways

**OCCUPATION:** - Deck Operations, Vessel Operations, Navigation and Planning

**REFERENCE ID:** LSC/Q4103

**ALIGNED TO:** Currently N/a for inland waterway vessels

**Brief Job Description:** The individual is responsible for overall boat operations and ensures safety, security and facilities on the vessel. S/He plans and leads the specialised operations like passenger vessel, tug vessel and NCV operations.

## ***Electives***

### ***Elective 1: Near Coastal Vessel Operations***

*The unit is about planning and conducting near sea operations like supply of goods to offshore locations*

### ***Elective 2: Tug Vessel Operations***

*The unit is about load planning, route mapping, assess operational limitations and operating for tug vessels*

### ***Elective 3: Passenger Vessel Operations***

*The unit is about assessing and facilitating passenger experience in a passenger vessel*

## ***Options***

### ***Option 1: Ship and Yard Planning***

*The unit is about supervising cargo handling and storage operations in the port terminal, Inland Container Depot (ICD) or Container Freight Station (CFS)*

**Personal Attributes:** The job holder should have normal or corrected eyesight, be physically fit and should have attention to details, and adaptability. The individual should be pro-active, organised and multitask.

<b>Qualifications Pack Code</b>	<b>LSC/Q4103</b>		
<b>Job Role</b>	<b>Vessel Operator Grade 3</b>		
<b>Credits(NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
<b>Sector</b>	<b>Logistics</b>	<b>Drafted on</b>	<b>30/06/2018</b>
<b>Sub-sector</b>	<b>Inland waterways</b>	<b>Last reviewed on</b>	<b>04/05/2019</b>
<b>Occupation</b>	<b>Deck Operations, Vessel Operations, Navigation and Planning</b>	<b>Next review date</b>	<b>04/05/2022</b>
<b>NSQC Clearance on</b>			
<b>Effective from date</b>			

<b>Job Role</b>	<b>Vessel Operator Grade 3</b>
<b>Role Description</b>	The individual is responsible for overall boat operations and ensures safety, security and facilities on the vessel.
<b>NSQF</b>	5
<b>Minimum Educational Qualifications</b>	Diploma / Class XII with relevant experience
<b>Maximum Educational Qualifications</b>	-
<b>Prerequisite License or Training</b>	Not Applicable for License. Should be proficient and cleared Level 4
<b>Minimum Job Entry Age</b>	21 years
<b>Experience</b>	2 years of work/experience as Vessel Operator Grade 2 and 1.5 years of work/apprentice experience as Vessel Operator Grade 1
<b>Applicable National Occupational Standards (NOS)</b>	<p><b>Compulsory:</b></p> <ol style="list-style-type: none"> <li><a href="#">LSC/N4107 Plan and oversee operations</a></li> <li><a href="#">LSC/N4108 Inspect and maintain vessel and equipment</a></li> <li><a href="#">LSC/N9701 Business development and stakeholder relations</a></li> <li><a href="#">LSC/N9602 Review performance and develop performance improvement plan</a></li> <li><a href="#">LSC/N9603 Profit and loss account management and cost accounting</a></li> <li><a href="#">LSC/N9904 Maintain integrity and ethics in operations</a></li> <li><a href="#">LSC/N4102 Follow and monitor health, safety and security procedures on vessel</a></li> </ol> <p><b>Electives (Mandatory to select atleast one):</b></p> <p><b>Elective 1: Near Coastal Vessel Operations</b></p> <ol style="list-style-type: none"> <li><a href="#">LSC/N4109 Manage near coastal vessel operations</a></li> </ol>

	<p><b>Elective 2: Tug Vessel Operations</b></p> <p>2.1 <a href="#">LSC/N4106 Manage tug vessel operations</a></p> <p><b>Elective 3: Passenger Vessel Operations</b></p> <p>3.1 <a href="#">LSC/N3902 Manage passenger vessel operations</a></p> <p><b>Options (Not mandatory)</b></p> <p><b>Option 1: Ship and Yard Planning</b></p> <p><a href="#">1.1 LSC/N3511 Perform ship and yard planning</a></p>
<b>Performance Criteria</b>	As described in the relevant OS units

Definitions

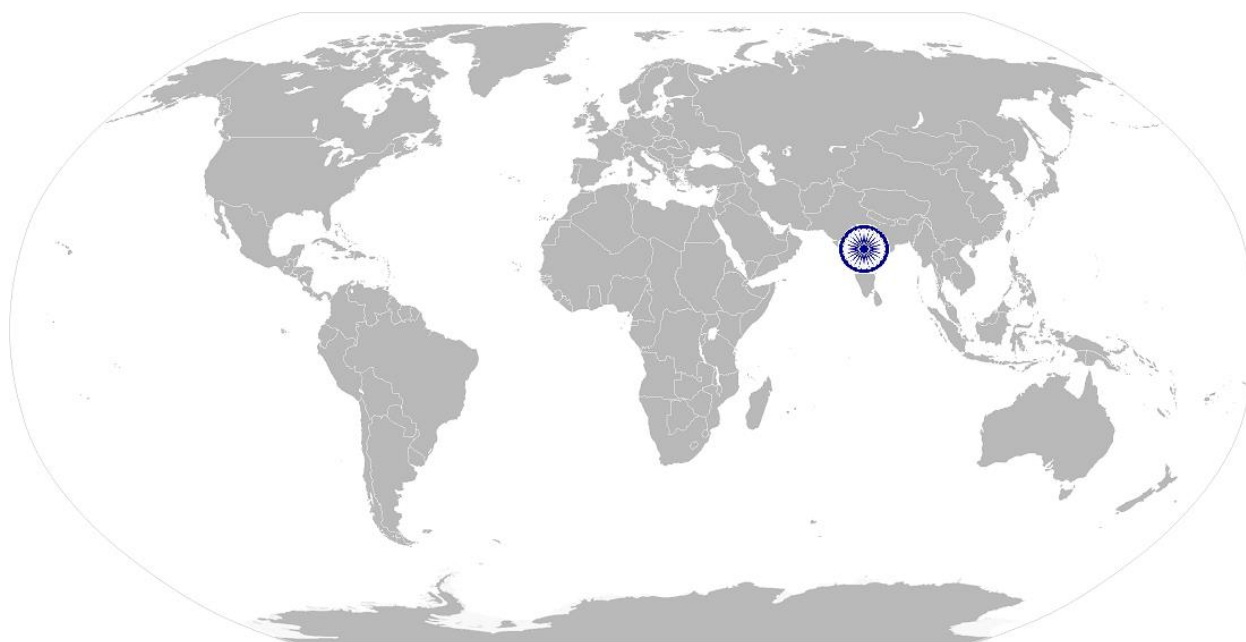
Keywords /Terms	Description
Core Skills/Generic Skills	Core Skills or Generic Skills are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the NOS, these include communication related skills that are applicable to most job roles.
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of NOS.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
Knowledge and Understanding	Knowledge and understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard.
National Occupational Standards (NOS)	NOS are Occupational Standards which apply uniquely in the Indian context
Occupation	Occupation is a set of job roles, which perform similar/related set of functions in an industry.
Organisational Context	Organisational Context includes the way the organization is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task.
Qualifications Pack(QP)	Qualifications Pack comprises the set of NOS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification pack code.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.
Scope	Scope is the set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a

	critical impact on the quality of performance required.
Sector	Sector is a conglomeration of different business operations having similar businesses and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-Sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Sub-functions	Sub-functions are sub-activities essential to fulfil the achieving the objectives of the function.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.

Acronyms

Keywords /Terms	Description
3PL	Third party logistics
BP	Bollard Pull
CFS	Container Freight Station
ECDIS	Electronics Charts Display and Information System
ERP	Enterprise Resource Planning
ETA	Expected Time of Arrival
GPS	Global Positioning System
ICD	Inland Container Depot
IMDG	International Maritime Dangerous Goods
JIT	Just in Time
MHEs	Material Handling Equipment
MIS	Management information system
NCV	Near Coastal Vessel
NOS	National Occupational Standards
NSQC	National Skills Qualifications Committee
NSQF	National Skills Qualifications Framework
OS	Occupational Standards
OSHA	Occupational Safety and Health Administration
PGA	Participative Government Agencies
PMS	Planned maintenance schedules
PPE	Personal Protective Equipment
QP	Qualifications Pack
RFID	Radio-Frequency Identification
SLA	Service Level Agreements
SOP	Standard Operating Procedures
VHF	Very High Frequency

# National Occupational Standard



## Overview

This unit is about planning route and operational strategy



**LSC/N4107**

**Plan and oversee operations**

**National Occupational Standard**

<b>Unit Code</b>	<b>LSC/N4107</b>
<b>Unit Title (Task)</b>	<b>Plan and oversee operations</b>
<b>Description</b>	This unit is about planning, operations, coordinating, communicating and overseeing vessel operations
<b>Scope</b>	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>Operational planning and coordination</li> <li>Oversee navigation, cargo operations and other activities</li> </ul> <p>Range: Management information system (MIS), navigation aids, Standard Operating Procedures (SOP), computer, projector, worksheets, stationery etc.</p>
<b>Performance Criteria(PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Operational planning and coordination</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. assess if the vessel is fit and equipped to perform the specified task</p> <p>PC2. develop vessel's sailing plan based on transport and travel requirements, using the map and navigation aids, factoring in weather and tide forecasts</p> <p>PC3. coordinate with port authorities, clients, shipping agents, etc. to finalize details regarding route, cargo, ETA, costs and continuous update on vessel position and status</p> <p>PC4. check for availability of adequate equipment, ration, stores, spares, life jackets and PPEs factoring in buffer for unforeseen circumstances</p> <p>PC5. order the master/ crew to execute the planned route</p> <p>PC6. work out expected time of arrival (ETA)</p> <p>PC7. communicate and update the port on the progress of the vessel</p>
<b>Oversee navigation, cargo operations and other activities</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC8. review and approve the task allocation plan prepared by masters for engine, catering, deck and cargo operation</p> <p>PC9. coordinate with shipper, surveyor and port for cargo discharge and loading and provide sign-off</p> <p>PC10. take regular update on engine room operations, cargo security and navigation of vessel during operations</p> <p>PC11. guide and approve major overhauls and course corrections as required</p> <p>PC12. devise emergency strategy, oversee emergency drills, and review inspection reports for emergency equipment</p> <p>PC13. check update on inventory and stock and make arrangement for replenishment</p>
<b>Knowledge and understanding (K)</b>	
<b>A. Organizational context</b>	<p>The individual on the job needs to know:</p> <p>KA1. organizational procedures and SOPs for tasks at hand, documentation policy</p>

**LSC/N4107**

**Plan and oversee operations**

	<p>and emergency responses, internal communication over network</p> <p>KA2. security and safety procedures to be followed</p> <p>KA3. reporting structure of the organization for escalation of issues</p> <p>KA4. risk and impact of not following defined procedures/work instructions</p> <p>KA5. coding system followed to communicate using flags, hand signals and sound signals</p>
<b>B. Technical knowledge</b>	<p>The individual on the job needs to know and understand:</p> <p>KB1. navigation terms and Mercator chart</p> <p>KB2. sea and port watch systems</p> <p>KB3. meteorological instruments such as Stevenson screen, Psychrometer, Barometer, Barograph, Anemometer, magnetic compass</p> <p>KB4. international code of signal and flags</p> <p>KB5. hazard identification and avoidance, warnings and safety signs</p> <p>KB6. emergency evacuation procedure</p> <p>KB7. handling of fuel spillage</p> <p>KB8. preparing of overall vessel maintenance plans, planned maintenance schedules (PMS), emergency and contingency plans</p> <p>KB9. various engine and deck operations</p> <p>KB10. use of fire extinguisher</p>
<b>Skills (S)</b>	
<b>A. Core skills/ generic skills</b>	<b>Reading skills</b>
	<p>The user/individual on the job needs to know how to read:</p> <p>SA1. written instructions</p> <p>SA2. map and navigational charts</p> <p>SA3. messages over internal and port communication system</p>
	<b>Writing skills</b>
	<p>The user/individual on the job needs to know how to write:</p> <p>SA4. instructions and reports</p> <p>SA5. communication via email and letters to stakeholders</p>
	<b>Oral communication (listening and speaking skills)</b>
	<p>The user/individual on the job needs to know how to:</p> <p>SA6. communicate in clear and concise manner with the crew, port authorities, shippers and other stakeholders</p>
<b>B. Professional Skills</b>	<b>Decision making</b>
	<p>The user/individual on the job needs to know how to:</p> <p>SB1. identify the most efficient route</p> <p>SB2. decide on operation plan</p> <p>SB3. identify activities to be prioritised</p>
	<b>Plan and organize</b>

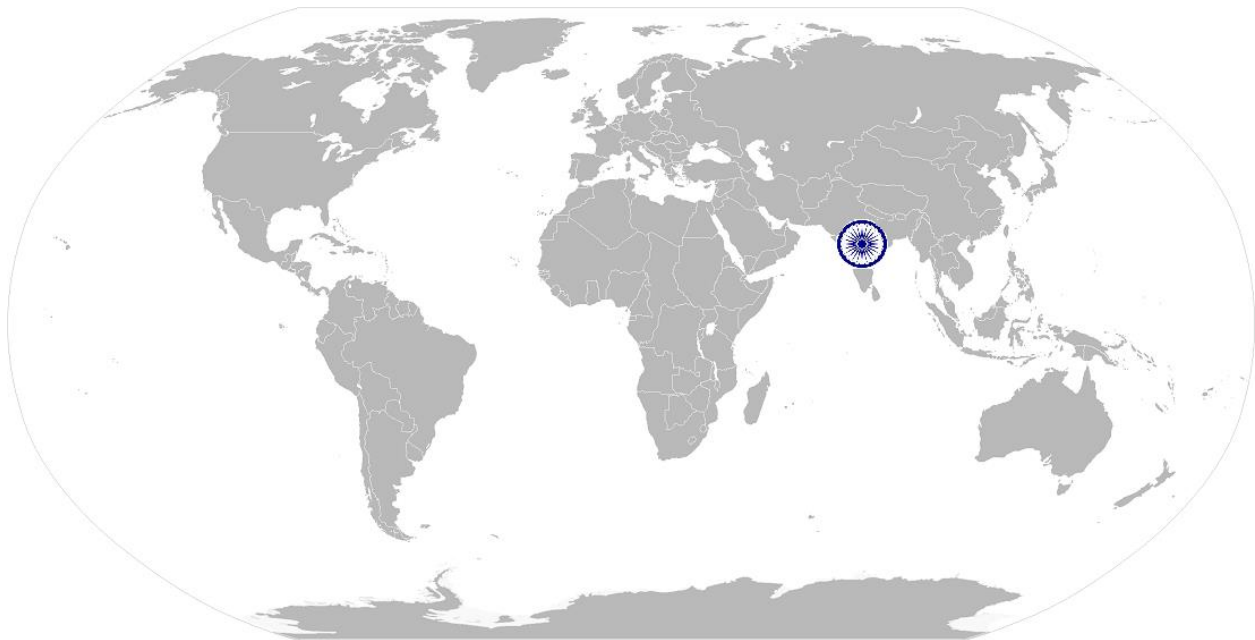
**LSC/N4107**
**Plan and oversee operations**

	The user/individual on the job needs to know how to: SB4. plan and estimate the time for each activity SB5. Plan work allocation and maintenance schedules SB6. respond in a timely manner SB7. prioritize and execute tasks based on instructions
	<b>Customer centricity</b>
	The user/individual on the job needs to know and understand: SB8. importance of given timelines SB9. urgency of priority requests
	<b>Problem solving</b>
	The user/individual on the job needs to know how to: SB10. resolve queries with respect to navigation, cargo, deck and engine operations SB11. authorize overhauling and major maintenance to troubleshoot problems
	<b>Analytical thinking</b>
	The user/individual on the job needs to know how to: SB12. analyse trends and identify common route options SB13. analyse trends and anticipate cargo and make prior adjustment and arrangements SB14. analyse performance across teams and identify skilling needs
	<b>Critical thinking</b>
	The user/individual on the job needs to know how to: SB15. identify and inform regarding emergency on vessel and action to be taken SB16. check that the cargo is correctly weighed and discharged to avoid any losses SB17. check for overall security of the vessel and cargo SB18. identify hazardous situation and dangerous goods and ensure adequate precautions are taken

## NOS Version Control

NOS Code	LSC/N4107		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	30/06/2018
Industry Sub-sector	Inland waterways	Last reviewed on	28/03/2019
Occupation	Vessel Operations (Navigation, vessel planning, route planning)	Next review date	28/03/2022

# National Occupational Standard



## Overview

This unit is about checking overall maintenance and functioning of the vessel equipment's

**LSC/N4108**

**Inspect and maintain vessel and equipment**

National Occupational Standard

Unit Code	LSC/N4108
Unit Title (Task)	Inspect and maintain vessel and equipment
Description	This unit is about checking overall maintenance and functioning of the vessel equipment
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>Inspect engine parts and equipment</li> <li>Inspect deck and cargo handling equipment</li> </ul> <p>Range: Vessel and engine room equipment, checklist, Standard Operating Procedures (SOP), computer, projector, stationery, worksheets, etc.</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
<b>Inspect engine part and equipment</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. check daily report of engineers and engine crew regarding engine and auxiliary machine operations</p> <p>PC2. conduct an inspection of engine room to check for cleanliness, availability of adequate fuel, functioning of exhausts, working condition</p> <p>PC3. conduct a trial run of engines and auxiliary part to check for troubles, repairs, etc.</p> <p>PC4. order a full maintenance check including greasing, painting and other preventive maintenance based on inspection</p> <p>PC5. oversee external repairs, servicing and overhauling parts and equipment's</p>
<b>Inspect deck and deck equipment</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC6. check daily report of master and deck crew regarding status of deck equipment and deck facility</p> <p>PC7. conduct an inspection of deck to check for cleanliness, missing paint jobs, corrosion, fractures, working condition, presence of emergency equipment, etc.</p> <p>PC8. check the functioning of anchors and steering units</p> <p>PC9. review order maintenance including greasing, painting and carpentry for preventive maintenance of deck and deck equipment based on inspection</p>
Knowledge and understanding (K)	
<b>A. Organizational Context</b>	<p>The individual on the job needs to know and understand:</p> <p>KA1. organizational procedures</p> <p>KA2. documentation and reporting as per organization's mandate</p> <p>KA3. security procedures to be followed</p> <p>KA4. escalation matrix for reporting identified problems</p> <p>KA5. risk and impact of not following defined procedures/work instructions</p> <p>KA6. coding system followed to label cargo</p> <p>KA7. IT system and Enterprise Resource Planning (ERP) system of the organization</p>
<b>B. Technical</b>	The individual on the job needs to know and understand:



**LSC/N4108**

**Inspect and maintain vessel and equipment**

<b>knowledge</b>	<p>KB1. various parts and components of the ship</p> <p>KB2. different type of vessels and their functions and cargo</p> <p>KB3. different type of cargo and their handling requirement</p> <p>KB4. various types of PPEs and their usage</p> <p>KB5. electrical shock and precautions to be observed to prevent shock</p> <p>KB6. types of power tools and equipment</p> <p>KB7. emergency procedure of dealing with pumps and valves</p> <p>KB8. functions of various kinds of equipment such as hoists, cranes and booms</p> <p>KB9. various signs and signals</p> <p>KB10. functions of capstan and winches</p> <p>KB11. donning and using breathing apparatus</p> <p>KB12. use of electrical equipment</p>
<b>Skills (S)</b>	
<b>C. Core Skills/ Generic Skills</b>	<b>Reading skills</b>
	<p>The user/individual on the job needs to know how to read:</p> <p>SA1. written instructions</p> <p>SA2. map and navigational charts</p> <p>SA3. Messages over internal and port communication system</p>
	<b>Writing skills</b>
	<p>The user/individual on the job needs to know how to write:</p> <p>SA4. Instructions and reports</p> <p>SA5. communication via email and letters to stakeholders</p>
	<b>Oral communication (listening and speaking skills)</b>
<b>D. Professional Skills</b>	<p>The user/individual on the job needs to know how to:</p> <p>SA6. communicate in clear and concise manner with the crew, port authorities, shippers and other stakeholders</p>
	<b>Decision making</b>
	<p>The user/individual on the job needs to know how to:</p> <p>SB1. decide on maintenance and repair requirement</p> <p>SB2. decide on maintenance task allocation</p> <p>SB3. identify activities to be prioritised</p>
	<b>Plan and organize</b>
	<p>The user/individual on the job needs to know how to:</p> <p>SB4. plan and estimate the time for each activity</p> <p>SB5. plan work allocation and maintenance schedules</p> <p>SB6. respond in a timely manner</p> <p>SB7. prioritize and execute tasks based on instructions</p>
	<b>Customer centricity</b>
	<p>The user/individual on the job needs to know and understand:</p> <p>SB8. importance of given timelines</p> <p>SB9. urgency of priority requests</p>

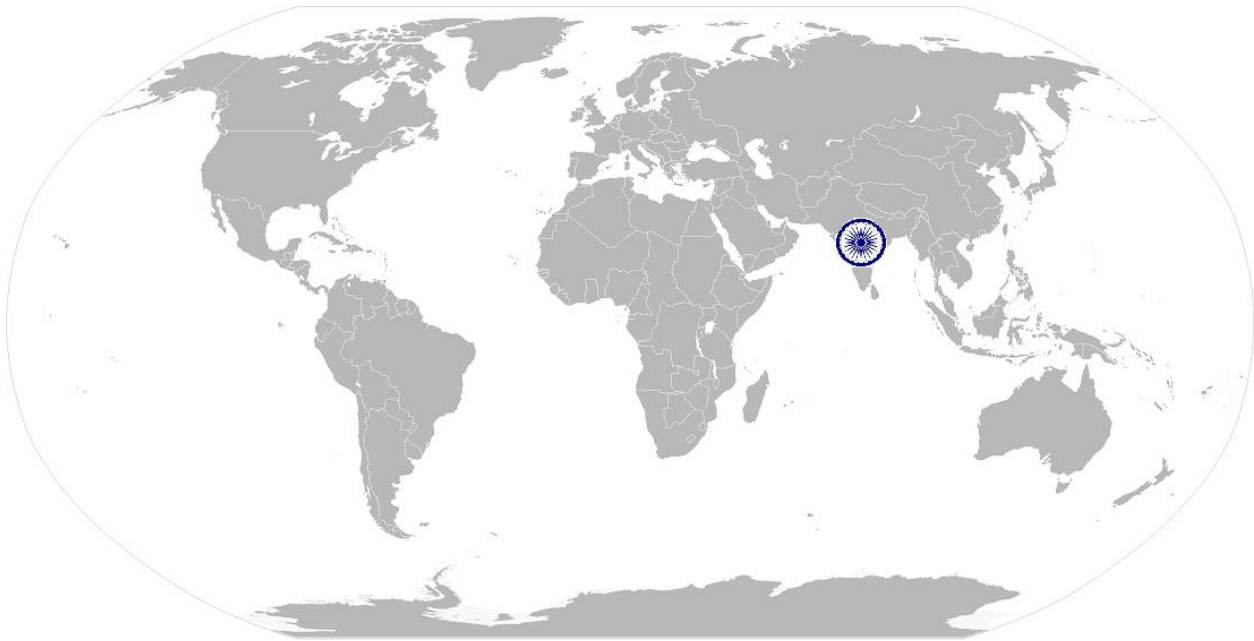
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**Inspect and maintain vessel and equipment**

	<b>Problem solving</b>
	The user/individual on the job needs to know how to: SB10. resolve queries with respect to deck and engine operations SB11. authorize overhauling and major maintenance to troubleshoot problems
	<b>Analytical thinking</b>
	The user/individual on the job needs to know how to: SB12. analyse common issues with respect to deck and engine equipment SB13. analyse trends of repairs and maintenance and schedule maintenance SB14. analyse performance across teams and identify skilling needs
	<b>Critical thinking</b>
	The user/individual on the job needs to know how to: SB15. identify and inform regarding emergency on vessel and action to be taken SB16. check that the equipment are well maintained and fit for operations SB17. check for overall security of the vessel and cargo SB18. identify hazardous situation in engine or deck and ensure adequate precautions are taken

## NOS Version Control

<b>NOS Code</b>	<b>LSC/N4108</b>		
<b>Credits(NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
<b>Industry</b>	<b>Logistics</b>	<b>Drafted on</b>	<b>30/06/2018</b>
<b>Industry Sub-sector</b>	<b>Inland waterways</b>	<b>Last reviewed on</b>	<b>28/03/2019</b>
<b>Occupation</b>	<b>Vessel Operations</b>	<b>Next review date</b>	<b>28/03/2022</b>

# National Occupational Standard



## Overview

This unit is about generating new business and maintaining relations with all stakeholders



**LSC/N9701**

**Business development and stakeholder relations**

National Occupational Standard

<b>Unit Code</b>	<b>LSC/N9701</b>
<b>Unit Title (Task)</b>	<b>Business development and stakeholder relations</b>
<b>Description</b>	This unit is about generating new business and maintaining relation with all stakeholders
<b>Scope</b>	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>• Generate new business prospects</li> <li>• Maintain customer relations</li> <li>• Coordinate with government officials, vendors and contractors</li> </ul> <p>Range: Management information system (MIS), Enterprise Resource Planning (ERP), worksheets, computer, projector, stationery etc.</p>
<b>Performance Criteria(PC) w.r.t. the scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Generate new business prospects</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. obtain a list of existing clients and new prospects from the company's sales database.</p> <p>PC2. prepare sales targets and relationship strategies</p> <p>PC3. prioritize the clients for contacting, based on the previous relationship building calls made to each of them</p> <p>PC4. call clients and prospects to seek meeting</p> <p>PC5. meet client to offer new services and take feedback for current services</p> <p>PC6. identify client's business need and offer customized and bundled solutions</p> <p>PC7. negotiate on costs, close the deal and collect organizational and payment details of the client</p> <p>PC8. take client's feedback before leaving</p> <p>PC9. update information into ERP, inform the relevant departments on sale closure</p>
<b>Maintain customer relations</b>	<p>To be competent, the user/ individual must be able to:</p> <p>PC10. regularly interact with the client over phone, emails or personal visits</p> <p>PC11. address the query raised by the customers effectively and timely</p> <p>PC12. take appropriate actions on escalations raised by customers</p> <p>PC13. handle customer grievances</p> <p>PC14. quickly respond to the clients for their e-mails, voice-messages, calls, etc.</p> <p>PC15. provide regular information to clients regarding new offerings, discounts, customised solutions, etc.</p>
<b>Co-ordinate with government officials, vendors and contractors</b>	<p>To be competent, the user/ individual must be able to:</p> <p>PC16. liaise with customs, other government departments, Participative Government Agencies (PGAs), etc. and build professional relations with them</p> <p>PC17. analyse and manage claim requests</p> <p>PC18. co-ordinate with marketing agencies for publicity of services of the company</p>

**LSC/N9701**

**Business development and stakeholder relations**

	<p>PC19. negotiate with carriers, warehouse and transport operators, custom brokers, insurance company representatives, vendors, etc. for services, preferential rates, service level agreements (SLA), payment period, etc.</p> <p>PC20. co-ordinate with labour contractor and local vendors for sufficient workforce, carrier vehicle availability as per work demand</p>
<b>Knowledge and understanding (K)</b>	
<p><b>B. Organizational context</b> (Knowledge of the company / organization and its processes)</p>	<p>The individual on the job needs to know and understand:</p> <p>KA1. vision, mission and values of the company</p> <p>KA2. company's reporting structure to support and expedite project activities</p> <p>KA3. company's policy and work instructions on quality standards as well as documentation policy</p> <p>KA4. importance of the individual's role in the workflow</p> <p>KA5. company's policy on business ethics and code of conduct</p> <p>KA6. business and performance of the company</p> <p>KA7. knowledge repository and various projects done by the company</p> <p>KA8. occupational health and safety standards, handling of special and dangerous goods, etc.</p> <p>KA9. procedures for dealing with loss or damage to goods</p> <p>KA10. value of items handled and implications of damage/loss of the same</p> <p>KA11. risk and impact of not following defined work, safety and security procedures</p> <p>KA12. company policy defined turn around time (TATs) and output metrics for daily operations</p> <p>KA13. just in time (JIT) mode of inventory management</p> <p>KA14. coding system followed to label items</p> <p>KA15. the IT system and ERP system of the organization</p>
<p><b>B. Technical knowledge</b></p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. process flow of service operation, value chain and basic supply chain value map within the sub sector</p> <p>KB2. state/country taxes and routing</p> <p>KB3. local and global geographical knowledge</p> <p>KB4. use of enterprise resource planning software (ERP)</p> <p>KB5. use of tools for documentation: MS excel and MS Word, etc.</p> <p>KB6. basics of statistical and quantitative analysis tools</p> <p>KB7. use of spreadsheets to tabulate and analyze the data</p> <p>KB8. structure and implications of fees and charges involved in transportation, warehousing, etc.</p> <p>KB9. transit rules and regulations</p> <p>KB10. significance of team coordination to achieve revenue and productivity targets of the organisation</p> <p>KB11. customer relationship management</p>

**LSC/N9701**

**Business development and stakeholder relations**

	<p>KB12. about contract management and Service Level Agreement (SLA)</p> <p>KB13. factors for evaluation of performance of vendors</p>
<b>Skills (S)</b>	
<b>A. Core skills/ generic skills</b>	<b>Reading skills</b>
	<p>The user/ individual on the job needs to know how to read:</p> <p>SA1. company quality policy, work instructions and customer requirement</p> <p>SA2. transit rules and trade policies</p> <p>SA3. regulatory requirement associated with custom clearance</p> <p>SA4. e-mails, invoices, letters, notes, memos, agreement reports, etc.</p>
	<b>Writing skills</b>
	<p>The user/ individual on the job needs to know how to:</p> <p>SA5. write e-mails and letters to government officials, customers, vendors, etc.</p> <p>SA6. note information about vendors on factors like quality of service, on-time order completion, cooperation etc</p>
	<b>Oral communication (listening and speaking skills)</b>
	<p>The user/ individual on the job needs to know how to:</p> <p>SA7. listen and understand the requirements of the client</p> <p>SA8. communicate with clients, government officials and other external stakeholders by using various communication channels</p> <p>SA9. exchange information with other managers, supervisory and operational staff at all levels</p> <p>SA10. carefully listen to vendor concerns and issues</p>
<b>C. Professional skills</b>	<b>Decision making</b>
	<p>The user/ individual on the job needs to know how to:</p> <p>SB1. decide corrective measures to improve customer ratings</p> <p>SB2. decide actions to be taken on escalations raised by the customer</p> <p>SB3. decide appropriate action for poor performance and lack of cooperation by vendor/ third party logistics (3PL)</p> <p>SB4. identify and prioritise on select clients and prospects for generating business</p>
	<b>Plan and organize</b>
	<p>The user/ individual on the job needs to know how to:</p> <p>SB5. liaison with customers, government officials, vendors and staff to ensure that smooth functioning of service centre/office</p> <p>SB6. plan and organise review meetings with vendors, contractors</p> <p>SB7. organise projects/ training plans for performance improvement</p>
	<b>Customer centricity</b>
	<p>The user/ individual on the job needs to know how to:</p> <p>SB8. take prompt action on queries raised by the customer</p> <p>SB9. address customer requirement and offer customised or bundled solutions</p>

**LSC/N9701**

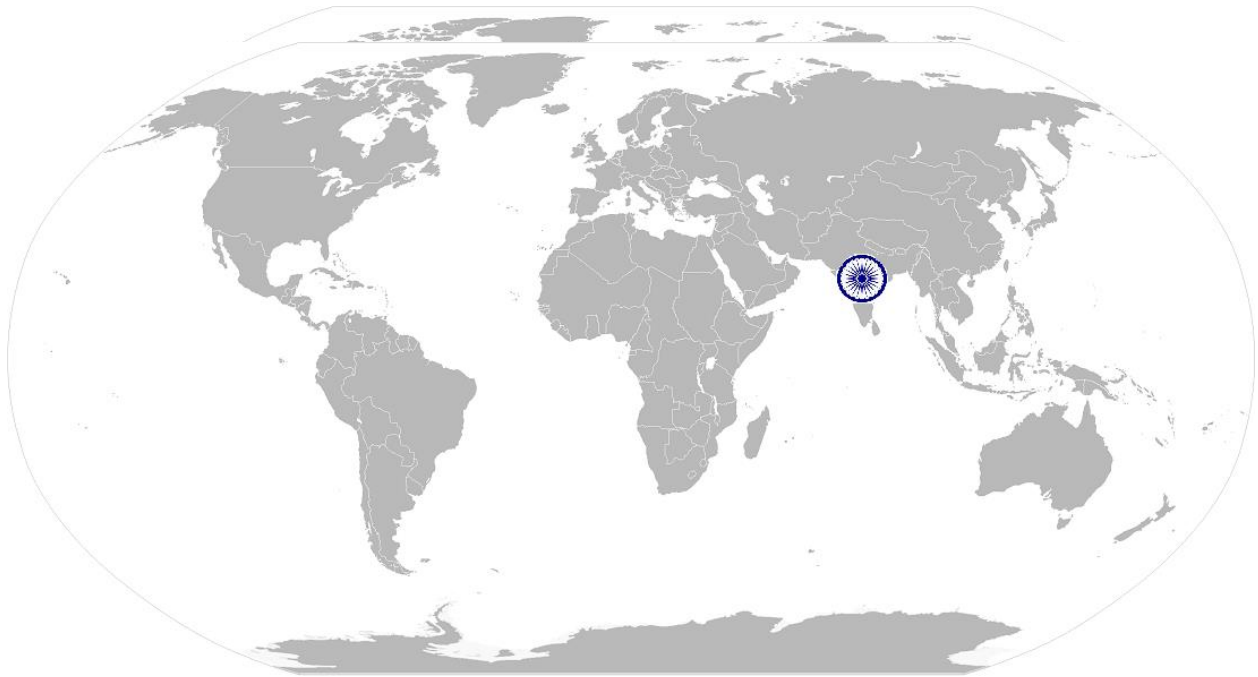
**Business development and stakeholder relations**

	SB10. suggest ideas and solutions to increase customer loyalty and satisfaction
	<b>Problem solving</b>
	The user/ individual on the job needs to know how to:
	SB11. resolve the queries raised by customers as well as government officials
	SB12. address the queries raised by vendors, contractors and other external stakeholders
	<b>Analytical thinking</b>
	The user/ individual on the job needs to know and how to:
	SB13. identify the factors that helped improve customer satisfaction
	SB14. identify commonly preferred bundles and customisations
	SB15. analyse reasons for customer dis-satisfaction
	SB16. identify areas that are crucial for performance improvement
	<b>Critical thinking</b>
	The user/ individual on the job needs to know how to:
	SB17. improve work processes by adopting best practices
	SB18. act upon constructively on any problems as identified
	SB19. handle personality clashes effectively

**NOS Version Control**

<b>NOS Code</b>	LSC/N9701		
<b>Credits(NSQF)</b>	TBD	<b>Version number</b>	1.0
<b>Industry</b>	Logistics	<b>Drafted on</b>	30/06/2018
<b>Industry Sub-sector</b>	Inland waterways	<b>Last reviewed on</b>	28/03/2019
<b>Occupation</b>	Sales and marketing/ business development	<b>Next review date</b>	28/03/2022

# National Occupational Standard



## Overview

This unit is about reviewing performance and developing performance improvement plan.



**LSC/N9602**
**Review performance and develop performance improvement plan**
**National Occupational Standard**

<b>Unit Code</b>	<b>LSC/N9602</b>
<b>Unit Title (Task)</b>	<b>Review performance and develop performance improvement plan</b>
<b>Description</b>	This unit is about reviewing performance and developing performance improvement plan
<b>Scope</b>	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>Analyse activity wise operational performance</li> <li>Identify reasons for non-performance and areas for improvement</li> <li>Implement performance improvement action plans</li> <li>Provide leadership and direction</li> </ul> <p>Range: Standard Operating Procedures (SOP), Management information system (MIS), Enterprise Resource Planning (ERP), worksheets, stationery, computer, projector etc.</p>
<b>Performance Criteria(PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Analyse activity wise operational performance</b>	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. analyse activity related performance metrics</p> <p>PC2. review output reports for escalated cases to identify reasons</p> <p>PC3. review asset utilization rates and revenue per manpower</p> <p>PC4. analyse trend of defaults, delays, etc. along with their reasoning</p> <p>PC5. analyse the trends of various output metrics like average time per case, average number delays per week, etc. to measure operational performance</p>
<b>Identify reasons for non-performance and areas of improvement</b>	<p>To be competent, the user/ individual must be able to:</p> <p>PC6. analyse reasons for non-performance with respect to each operation and department</p> <p>PC7. identify process improvement areas and departments</p> <p>PC8. identify training needs and develop training plans</p> <p>PC9. analyse resource utilization trends to arrive at cases of under-utilization and poor equipment management</p> <p>PC10. examine staff turnover issues</p> <p>PC11. identify the department and staffs that are underperforming and take necessary actions to improve performance</p>
<b>Implement performance review action plan</b>	<p>To be competent, the user/ individual must be able to:</p> <p>PC12. prioritise performance improvement project implementation</p> <p>PC13. develop strategic action plans to increase overall worker and operational efficiency</p> <p>PC14. communicate performance improvement benefits to senior management and take their approval</p> <p>PC15. establish key performance indicators, track regular performance output with respect to set goals and take corrective actions</p> <p>PC16. address all employee performance problems promptly and directly in</p>

**LSC/N9602      Review performance and develop performance improvement plan**

	<p>accordance with personnel policies</p> <p>PC17. take necessary action in case of theft or fiddling with the shipment</p>
<b>Provide leadership and direction</b>	<p>To be competent, the user/ individual must be able to:</p> <p>PC18. develop, implement, and manage departmental policies, procedures, standards and strategies as required</p> <p>PC19. set objectives and provide support to team members</p> <p>PC20. communicate and emphasise on policies and standards in line with the regulations laid down by various governing Acts</p> <p>PC21. guide and support them to cope with work load</p> <p>PC22. conduct meetings with staff to assess group's overall performance; discuss ideas for improvement and inform staff of new developments</p> <p>PC23. support team members in identifying, developing and implementing new ideas</p> <p>PC24. direct the hiring, training, and performance evaluations of staff</p>
<b>Knowledge and understanding (K)</b>	
<b>A. Organizational context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. vision, mission and values of the company</p> <p>KA2. company's policy on business ethics and code of conduct</p> <p>KA3. business and performance of the company</p> <p>KA4. knowledge repository and various projects done by the company</p> <p>KA5. reporting structure to support and expedite project activities</p> <p>KA6. escalation matrix for reporting issues/challenges</p> <p>KA7. company's policy and work instructions on quality standards</p> <p>KA8. company's personnel management and incentives rules</p> <p>KA9. importance of the individual's role in the workflow</p> <p>KA10. company policy defined turn around time (TATs) and output metrics for daily operations</p> <p>KA11. company's approach towards skill up-gradation and technology modernisation</p> <p>KA12. company's training plans and schedules</p>
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. process flow of service operation, value chain and basic supply chain map within the sub sector</p> <p>KB2. state/country taxes and routing</p> <p>KB3. local and global geographical knowledge</p> <p>KB4. use of enterprise resource planning software (ERP)</p> <p>KB5. use of various tools for documentation: MS excel and MS Word, etc.</p> <p>KB6. basics of statistical and quantitative analysis tools</p> <p>KB7. use of spreadsheets to tabulate and analyze the data</p> <p>KB8. structure and implications of fees and charges involved in transportation, warehousing, etc.</p>

**LSC/N9602      Review performance and develop performance improvement plan**

	<p>KB9. transit rules and regulations</p> <p>KB10. significance of team coordination to achieve revenue and productivity targets of the organisation</p> <p>KB11. customer relationship management and contract management, and service level agreement (SLA)</p> <p>KB12. factors for evaluation of operational performance and utilization for resources</p> <p>KB13. different metrics of performance evaluation</p> <p>KB14. different solutions to improve performance and utilization</p>
<b>Skills (S)</b>	
<b>A. Core skills/ generic skills</b>	<b>Reading skills</b>
	<p>The user/ individual on the job needs to know how to read:</p> <p>SA1. company policy and standard work-related documents</p> <p>SA2. emails, letters and instructions</p> <p>SA3. daily reports</p>
	<b>Writing skills</b>
	<p>The user/ individual on the job needs to know how to:</p> <p>SA4. prepare reports on delivery performance, demand forecast, franchisee performance etc.</p> <p>SA5. write Minutes of Meeting, mails and memos</p>
	<b>Oral communication (listening and speaking skills)</b>
	<p>The user/ individual on the job needs to know how to:</p> <p>SA6. interact with team members to work efficiently</p> <p>SA7. communicate effectively with colleagues and vendors to achieve smooth workflow</p> <p>SA8. communicate quality standards and performance metrics clearly to all the employees</p> <p>SA9. listen to queries patiently and answer them aptly</p>
<b>B. Professional skills</b>	<b>Decision making</b>
	<p>The user/ individual on the job needs to know how to:</p> <p>SB1. decide on corrective measures to improve performance</p> <p>SB2. identify and prioritise modules of improvement plans</p> <p>SB3. prioritise areas for performance improvement</p> <p>SB4. decide on actions to be taken on any issues identified hampering operational efficiency</p> <p>SB5. identify departments providing high performance and departments with low performance</p> <p>SB6. decide on training plans and improvement plans for departments and individuals</p>



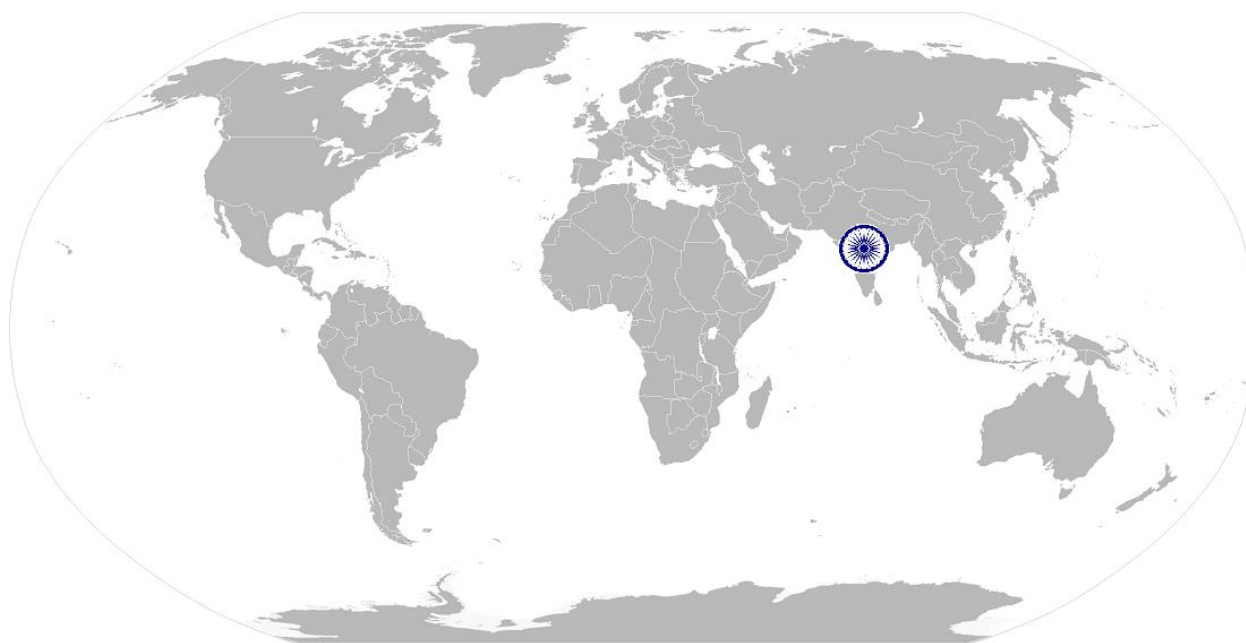
**LSC/N9602      Review performance and develop performance improvement plan**

	<b>Plan and organize</b>
	The user/ individual on the job needs to know how to:
	SB7.      plan and organise performance review sessions
	SB8.      make action plan for performance improvement
	SB9.      organise projects/ training plans for performance improvement
	SB10.    monitor the activities of the performance improvement plan
	SB11.    plan and organise monitoring activities to ensure no breach in terms of commitments
	SB12.    timely complete analysis on reports and issues identified
	<b>Customer centricity</b>
	The user/ individual on the job needs to know how to:
	SB13.    analyse performance with focus on customer requirement and ability to improve satisfaction levels with customers
	SB14.    sensitise individuals towards customer satisfaction and train them accordingly
	<b>Problem solving</b>
	The user/ individual on the job needs to know how to:
	SB15.    resolve interpersonal issues among employees
	SB16.    resolve performance related bottlenecks with respect to individuals and resources
	SB17.    guide staff towards appropriate training to improve performance and remove bottlenecks
	SB18.    assess resource utilization and performance and suggest solutions to remove bottlenecks
	<b>Analytical thinking</b>
	The user/ individual on the job needs to know and understand how to:
	SB19.    analyse reports and take necessary action
	SB20.    analyse output and delivery performance to infer bottlenecks
	SB21.    assess the performance of resources to see capacity utilization
	SB22.    assess performance to see if there is a need for technology up-gradation or training
	<b>Critical thinking</b>
	The user/ individual on the job needs to know and understand how to:
	SB23.    improve work processes by adopting global best practices
	SB24.    resolve recurring inter-personal or system related conflicts with colleagues that hinder service
	SB25.    act upon constructively on any problems as pointed by seniors
	SB26.    review performance with respect to requirement and compare with global peers to see prospects for technology and skill up-gradation

**LSC/N9602      Review performance and develop performance improvement plan**

**NOS Version Control**

NOS Code	LSC/N9602		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	30/06/2018
Industry Sub-sector	Generic	Last reviewed on	28/03/2019
Occupation	Management	Next review date	28/03/2022

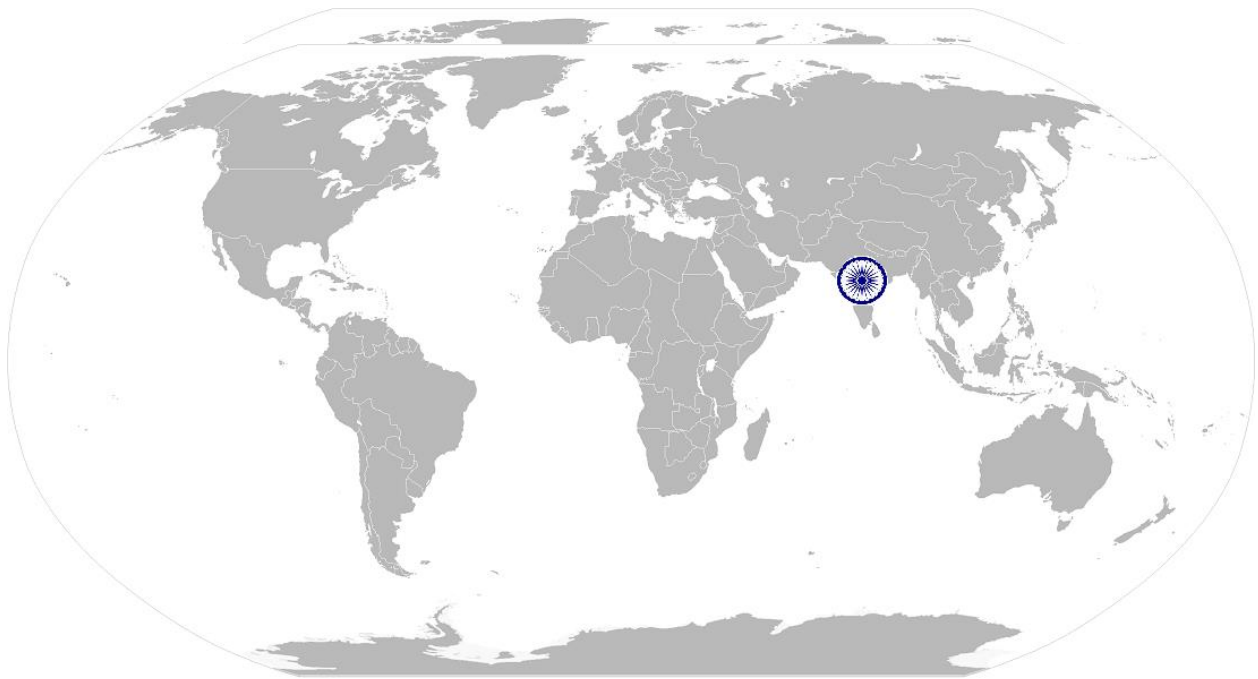


**LSC/N9603**

**Profit and loss account management and cost accounting**

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# National Occupational Standard



## Overview

This unit is about Profit and loss account management and cost accounting

LSC/N9603

Profit and loss account management and cost accounting

National Occupational Standard

<b>Unit Code</b>	<b>LSC/N9603</b>
<b>Unit Title (Task)</b>	<b>Profit and loss account management and cost accounting</b>
<b>Description</b>	This unit is about Profit and loss account management and cost accounting
<b>Scope</b>	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>Profit and loss account management and review</li> <li>Analysis of activity based costs</li> </ul> <p>Range: Management information system (MIS), Enterprise Resource Planning (ERP), spreadsheet program, computer, projector, stationery, worksheets, etc.</p>
<b>Performance Criteria(PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Profit and Loss account management and review</b>	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. review department wise budgets and make amendments if required</p> <p>PC2. collate and prepare annual budgets along with sales and profit targets</p> <p>PC3. schedule both capital and operational expenses accordance to the budget</p> <p>PC4. analyse and review the P&amp;L performance for the unit</p> <p>PC5. analyse profitability and business performance trends department wise</p> <p>PC6. periodically analyse variances in the expenditure with respect to the budget and accordingly take corrective actions</p> <p>PC7. periodically analyse the physical output and performance with respect to the budget and identify places for improvements</p> <p>PC8. undertake adequate risk management so as to meet Key Performance targets</p> <p>PC9. manage and control budgets of different departments on a periodic basis to optimise financial performance</p>
<b>Analysis of activity based costs</b>	<p>PC10. periodically review activity and department financial performance</p> <p>PC11. identify the activities having high variance with respect to the budgeted costs or the forecasted revenue</p> <p>PC12. analyse the actual cost w.r.t physical output to draw inferences</p> <p>PC13. identify reasons in discussion with department and take remedial and corrective actions where-ever required</p> <p>PC14. work towards rationalizing the cost of the activity wise operations to achieve higher financial goals</p>
<b>Knowledge and understanding (K)</b>	
<b>A. Organizational context</b> (Knowledge of the company / organization and	<p>The individual on the job needs to know and understand:</p> <p>KA1. vision, mission and values of the company</p> <p>KA2. company's reporting structure to support and expedite project activities</p> <p>KA3. company's policy and work instructions on quality standards as well as documentation policy</p>

**LSC/N9603**

**Profit and loss account management and cost accounting**

its processes)	<p>KA4. importance of the individual's role in the workflow</p> <p>KA5. company's policy on business ethics and code of conduct</p> <p>KA6. business and performance of the company</p> <p>KA7. knowledge repository and various projects done by the company</p> <p>KA8. occupational health and safety standards, handling of special and dangerous goods, etc.</p> <p>KA9. procedures for dealing with loss or damage to goods</p> <p>KA10. value of items handled and implications of damage/loss of the same</p> <p>KA11. risk and impact of not following defined work, safety and security procedures</p> <p>KA12. company policy defined turn around time (TATs) and output metrics for daily operations</p> <p>KA13. coding system followed to label items</p> <p>KA14. IT system and enterprise resource planning (ERP) system of the organization</p> <p>KA15. organizational goal for the year as well as branch/ territory targets</p>
<b>B. Technical knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. process flow of service operation and understanding of basic supply chain value chain</p> <p>KB2. state/country taxes and routing</p> <p>KB3. local and global geographies</p> <p>KB4. use of enterprise resource planning software (ERP) and the MIS</p> <p>KB5. use of tools for documentation: MS excel and MS Word, etc.</p> <p>KB6. basics of statistical and quantitative analysis tools</p> <p>KB7. use of spreadsheets to tabulate and analyze the data</p> <p>KB8. structure and implications of fees and charges involved in transportation, warehousing, processing clearances, etc.</p> <p>KB9. transit rules and regulations</p> <p>KB10. working and capacities of different Material Handling Equipment (MHEs) and other equipment used for handling the shipment</p> <p>KB11. procurement related concepts like Purchase order (PO), Invoices, procedures etc.</p> <p>KB12. significance of team coordination to achieve revenue and productivity targets of the organisation</p> <p>KB13. various techniques for performance improvement and cost accounting</p> <p>KB14. budgeting excercises</p>
<b>Skills (S)</b>	
<b>A. Core skills/ generic skills</b>	<p><b>Reading skills</b></p> <p>The user/individual on the job needs to know how to read:</p> <p>SA1. company's work instructions, customer requirement and quality policy</p> <p>SA2. egal policies and regulations</p>



LSC/N9603

Profit and loss account management and cost accounting

	SA3. internal communications memorandums SA4. written instructions, standard operating procedures SA5. SOPs and documents required for all operational activities SA6. inferences drawn from the system reports SA7. financial statements
	<b>Writing skills</b>
	The user/individual on the job needs to know how to: SA8. maintain the record of as per company's policy SA9. make the note of instructions to team members SA10. develop operating procedures and update them SA11. write communications, letters, etc. SA12. prepare daily reports, checklists SA13. prepare reports and presentations based on data analytics and ERP reports
	<b>Oral communication (listening and speaking skills)</b>
	The user/individual on the job needs to know how to: SA14. communicate with client, external coordinators, internal staff effectively SA15. motivate employees SA16. share experiences and provide guidance to juniors and peers
<b>B. Professional skills</b>	<b>Decision making</b>
	The user/ individual on the job needs to know and understand how to: SB1. assess business performance to identify need for interventions SB2. identify areas for improvement and accordingly suggest remedial action SB3. identify areas for budget modifications and budget cuts SB4. decide on ways to improve performance
	<b>Plan and organize</b>
	The user/ individual on the job needs to know how to: SB5. plan and organise performance review sessions SB6. make action plan for performance improvement SB7. organise projects/ training plans for performance improvement SB8. monitor the activities of the performance improvement plan
	<b>Customer centricity</b>
	The user/ individual on the job needs to know how to: SB9. sensitive employees towards customer requirements SB10. focus on customer satisfaction as a key part of the performance review
	<b>Problem solving</b>
	The user/individual on the job needs to know how to: SB11. identify reasons for variances and resolve them in discussion with team and management SB12. suggest new technologies, capital purchases, operational strategies to

## LSC/N9603

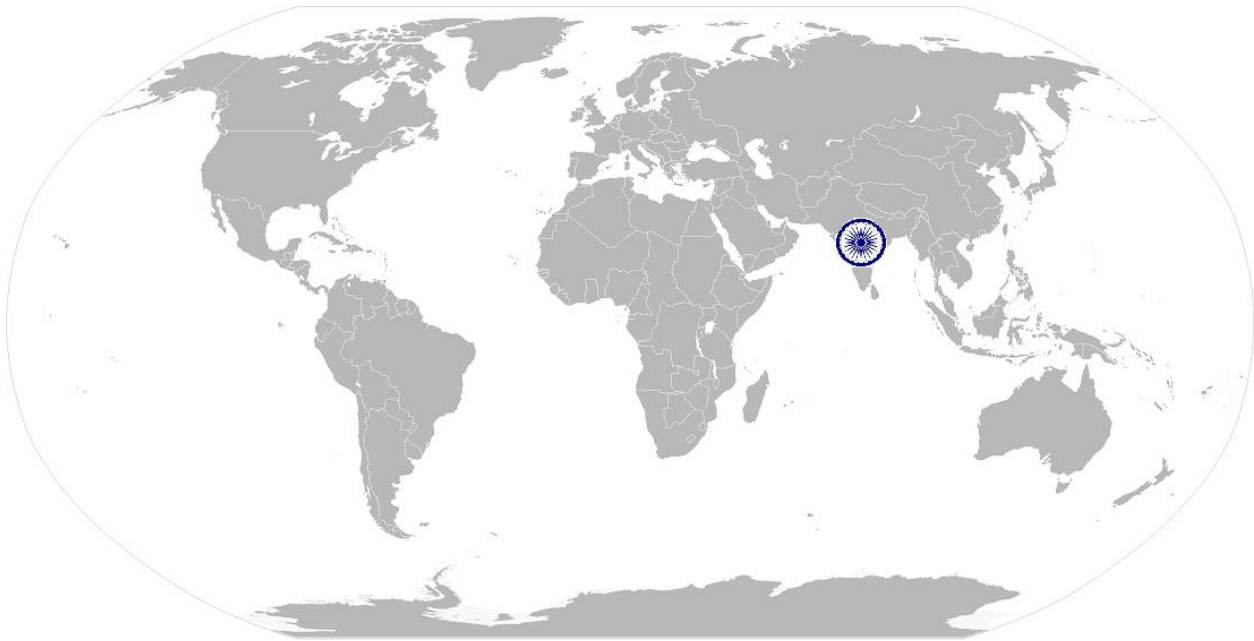
## Profit and loss account management and cost accounting

	enhance operational and financial performance
	<b>Analytical thinking</b>
	The user/individual on the job needs to know how to: SB13. analyze reasons for variances across departments SB14. compare with past trends to see if it is seasonal or cyclical in nature SB15. identify areas that are crucial for improvement and accordingly revisit budgets
	<b>Critical thinking</b>
	The user/individual on the job needs to know how to: SB16. assess the financial performance and make strategic decisions regarding budgets, focus areas SB17. motivate and ensure output so as to achieve financial goals

## NOS Version Control

<b>NOS Code</b>	<b>LSC/N9603</b>		
<b>Credits(NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
<b>Industry</b>	<b>Logistics</b>	<b>Drafted on</b>	<b>30/06/2018</b>
<b>Industry Sub-sector</b>	<b>Generic</b>	<b>Last reviewed on</b>	<b>28/03/2019</b>
<b>Occupation</b>	<b>Management</b>	<b>Next review date</b>	<b>28/03/2022</b>

# National Occupational Standard



## Overview

This unit is about maintaining integrity, ensuring data security, and professional and ethical practice



**LSC/N9904**

**Maintain and monitor integrity and ethics in operations**

National Occupational Standard

Unit Code	LSC/N9904
Unit Title (Task)	Maintain and monitor integrity and ethics
Description	This unit is about maintaining integrity, ensuring data security, and professional and ethical practice
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>• Maintain integrity and ensure data security</li> <li>• Professional and ethical practice</li> <li>• Ensure regulatory compliance</li> </ul> <p>Range: Standard Operating Procedures (SOP), computer, projector, stationery, worksheets, etc.</p>
Performance Criteria(PC) w.r.t. the scope	
Element	Performance Criteria
<b>Maintain integrity ensuring data security</b>	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. refrain from indulging in corrupt practices</p> <p>PC2. avoid using company's funds, property or resources for undertaking personal activities</p> <p>PC3. protect customer's information and ensure it is not misused</p> <p>PC4. protect data and information related to business or commercial decisions</p>
<b>Practice ethical and professional behavior</b>	<p>To be competent, the user/ individual must be able to:</p> <p>PC5. avoid acceptance of cash or kind from vendors for support or contract negotiations</p> <p>PC6. demonstrate and practice ethics in day-to-day processes and dealings with customers and colleagues</p> <p>PC7. avoid nepotism</p> <p>PC8. consult supervisor or senior management when in situations that may require differentiating between ethical and unethical</p> <p>PC9. report promptly all violations of code of ethics</p> <p>PC10. dress up and conduct in a professional manner</p> <p>PC11. communicate with clients and stakeholders in a soft and polite manner</p> <p>PC12. follow etiquettes in accordance to the place</p>
<b>Ensure regulatory compliance</b>	<p>To be competent, the user/ individual must be able to:</p> <p>PC13. check for regulatory documentation and compliances for the shop floor as per information from the supervisor</p> <p>PC14. perform activities considering the regulatory requirements</p> <p>PC15. use PPEs in accordance to regulatory requirements</p> <p>PC16. identify the different types of dangerous goods and handling methodologies</p> <p>PC17. follow the SOP for handling of different types of dangerous goods</p> <p>PC18. consult supervisor or senior management when in situations that may require differentiating between ethical and unethical</p> <p>PC19. promptly report all regulatory violations</p>

**LSC/N9904 Maintain and monitor integrity and ethics in operations**

<b>Knowledge and understanding (K)</b>	
<b>A. Organizational context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. company's policies on use of language</p> <p>KA2. company's Human Resources policies</p> <p>KA3. company's code of ethics and business</p> <p>KA4. company's whistle blower policy</p> <p>KA5. company's rules related to sexual harassment</p> <p>KA6. company's reporting structure</p> <p>KA7. company's documentation policy</p>
<b>B. Technical knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. principles of code of ethics and business ethics</p> <p>KB2. different regulations and acts that are applicable for the sub-sector and logistics sector as a whole</p> <p>KB3. understand the documentary compliance required for different type of products</p>
<b>Skills (S)</b>	
<b>A. Core skills/ generic skills</b>	<b>Reading skills</b>
	<p>The individual on the job needs to know how to read:</p> <p>SA1. policy documents and work related documents</p> <p>SA2. emails letters and communications</p> <p>SA3. acts and regulations</p>
	<b>Writing skills</b>
	<p>The individual on the job needs to know and understand how to write:</p> <p>SA4. instructions, communications to internal staff</p> <p>SA5. emails and letters</p> <p>SA6. reports</p>
	<b>Oral communication (listening and speaking skills)</b>
	<p>The individual on the job needs to know how to:</p> <p>SA7. interact with internal and external stakeholders</p> <p>SA8. communicate with peers and subordinates</p>
<b>B. Professional skills</b>	<b>Decision making</b>
	<p>The individual on the job needs to know how to:</p> <p>SB1. take appropriate action in a vulnerable situation</p> <p>SB2. identify breaches and take necessary actions</p> <p>SB3. identify documentary requirement for a specific product or regulation and take necessary action</p>
	<b>Plan and organize</b>
	<p>The individual on the job needs to know how to:</p> <p>SB4. plan and organise steps/ actions as per company's guidelines, if any violation of code of ethics is noticed in the company</p>

**LSC/N9904**
**Maintain and monitor integrity and ethics in operations**

	SB5. plan and organise training sessions, sensitization sessions for work force
	SB6. plan review meetings to monitor compliance with ethics and regulations
	<b>Customer centricity</b>
	The individual on the job needs to know how to:
	SB7. prevent company and customer information leakage
	<b>Problem Solving</b>
	The individual on the job needs to know how to:
	SB8. provide proper advice or guidance to colleagues to deal with sensitive issue
	SB9. suggest solutions to supervisors and workers when in an ethical dilemma
	SB10. identify conflict of interests and take necessary actions
	<b>Analytical thinking</b>
	The individual on the job needs to know how to:
	SB11. review reports to identify common trends of defaults
	SB12. conduct review to analyse the reasons for default
	<b>Critical thinking</b>
	The individual on the job needs to know how to:
	SB13. check that all regulatory compliances are adhered to
	SB14. check that any unethical behaviour gets captured before a damage or negative impact happens

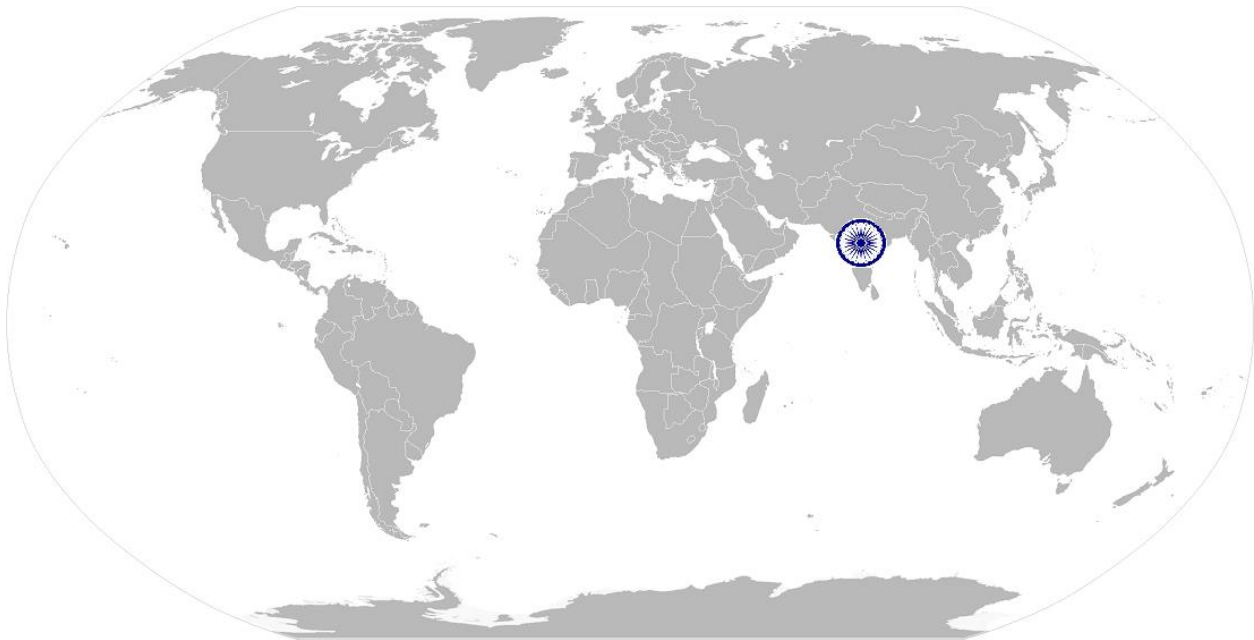
**NOS Version Control**

<b>NOS Code</b>	<b>LSC/N9904</b>		
<b>Credits(NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
<b>Industry</b>	<b>Logistics</b>	<b>Drafted on</b>	<b>30/06/2018</b>
<b>Industry Sub-sector</b>	<b>Generic</b>	<b>Last reviewed on</b>	<b>28/03/2019</b>
<b>Occupation</b>	<b>Generic</b>	<b>Next review date</b>	<b>28/03/2022</b>

**LSC/N4102**

**Follow and monitor health, safety and security procedures on vessel**

# National Occupational Standard



## **Overview**

This unit is about ensuring compliance with health, safety and security procedures at the workplace

**LSC/N4102**
**Follow and monitor health, safety and security procedures on vessel**

## National Occupational Standard

Unit Code	LSC/N4102
Unit Title (Task)	Follow and monitor health, safety and security procedures on vessel
Description	This unit is about ensuring compliance with health, safety and security procedures at the workplace.
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>Survival Techniques</li> <li>First aid</li> <li>Fire prevention and fire fighting</li> <li>Personal safety and social responsibility</li> <li>Security procedures</li> </ul> <p>Range: Personal Protective Equipment (PPE), first aid kit, fire safety equipment, Standard Operating Procedures (SOP), worksheets, computer, projector, stationery etc.</p>
Performance Criteria(PC) w.r.t. the scope	
Element	Performance Criteria
Survival techniques	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. wear a life jacket and immersion suit</p> <p>PC2. safely jump from a height into the water</p> <p>PC3. swim while wearing lifejacket</p> <p>PC4. right an inverted life raft while wearing life jacket</p> <p>PC5. board a life raft or survival vessel from the vessel or the water while wearing life jacket</p> <p>PC6. keep afloat without life jacket</p> <p>PC7. operate survival craft, life raft and its equipment and communication devices</p>
First Aid	<p>To be competent, the user/ individual must be able to:</p> <p>PC8. assess the casualty and immediate medical needs and threat to own safety</p> <p>PC9. position casualty and apply resuscitation techniques</p> <p>PC10. apply measures to control bleeding, cover and secure burn injuries using bandages and emergency medical kit</p> <p>PC11. apply measures for basic shock management</p> <p>PC12. assist in rescue and transport of the casualty</p>
Fire prevention and fire fighting	<p>To be competent, the user/ individual must be able to:</p> <p>PC13. take due precautions like – segregate and store, ensure proximity to firefighting equipment, etc. while storing inflammable materials on-board the vessel</p> <p>PC14. regularly monitor the inflammable material and cargo for fire hazards</p> <p>PC15. organise and maintain the firefighting equipment to make it easily accessible and operable during emergencies</p> <p>PC16. check fire and smoke alarms for functionality</p>



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**Follow and monitor health, safety and security procedures on vessel**

	PC17. keep the emergency response routes and escape routes clear PC18. use different protective equipment and high pressure breathing equipment PC19. use different type of firefighting equipment to extinguish a fire, when required PC20. participate in fire and emergency drills
<b>Personal safety and social responsibilities</b>	To be competent, the user/ individual must be able to: PC21. inform and take appropriate action when discovering a potential emergency PC22. recognize the emergency signal and respond as per the emergency plan PC23. follow the designated escape routes PC24. follow safe and environmental friendly working practices PC25. follow precautions while entering closed areas and hazardous areas on-board the vessel PC26. maintain effective communications in person and while using vessel communication devices and systems
<b>Security procedures</b>	To be competent, the user/ individual must be able to: PC27. follow vessel security plan PC28. identify security risks and threats, communicate and initiate action as per vessel security plan PC29. undertake regular vessel inspection with respect to vessel and cargo security PC30. check that all cargo containers, holds and hatches are secured PC31. check security equipment and system for functionality and maintenance
<b>Knowledge and understanding (K)</b>	
<b>A. Organizational context</b> (Knowledge of the company / organization and its processes)	The individual on the job needs to know: KA1. organizational procedures and SOPs for tasks at hand, documentation policy and emergency responses, internal communication over network KA2. security and safety procedures to be followed KA3. reporting structure of the organization for escalation of issues KA4. risk and impact of not following defined procedures/work instructions KA5. coding system followed to communicate using flags, hand signals and sound signals
<b>B. Technical knowledge</b>	The individual on the job needs to know and understand: KB1. various nautical terms related to navigation – hulls, shipside, engine room, etc. KB2. various parts and components of the ship KB3. map reading and identification of location in the globe KB4. different type of vessels and their functions and cargo KB5. different type of cargo and their handling requirement KB6. basics of Occupational Safety and Health Administration (OSHA) KB7. necessary security procedures and vessel security plan and contingency plan KB8. layout of fire-fighting and first aid on the vessel KB9. safety and security procedures for different operations and equipment



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	KB10. handling procedure for hazardous / fragile cargo KB11. security procedures for dangerous / hazardous goods – International Maritime Dangerous Goods (IMDG) cargo KB12. different personal protective equipment (PPE), their usage and purpose KB13. various survival techniques
<b>Skills (S)</b>	
<b>A. Core skills/ generic skills</b>	<b>Reading skills</b>
	The user/individual on the job needs to know how to read: SA1. procedures and standards related to health, safety and security of vessel and cargo SA2. vessel security and emergency plan SA3. emergency equipment layout SA4. various documents related to security and movement of cargo
	<b>Writing skills</b>
	The user/individual on the job needs to know how to: SA5. fill forms related to health, safety and security procedures
	<b>Oral communication (listening and speaking skills)</b>
	The user/individual on the job needs to know and understand how to: SA6. communicate clearly with colleagues regarding safety procedures SA7. share experience and provide guidance to peers
<b>B. Professional skills</b>	<b>Decision making</b>
	The user/individual on the job needs to know how to: SB1. identify threats to security and emergency situations SB2. decide the right equipment to be used in case of fire and threat emergency SB3. decide the first aid required upon seeing casualty
	<b>Plan and organize</b>
	The user/individual on the job needs to know how to: SB4. plan actions in case of security threat or emergency SB5. prioritize and execute tasks as per contingency plan
	<b>Customer centricity</b>
	The user/individual on the job needs to know and understand how to: SB6. Follow instructions as per vessel contingency plan
	<b>Problem solving</b>
	The user/individual on the job needs to know and understand how to: SB7. identify any threats on personal health, safety, security, etc. and take appropriate actions SB8. identify risks aboard the vessel and inform superiors
	<b>Analytical thinking</b>
	The user/individual on the job needs to know and understand how to:

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## Follow and monitor health, safety and security procedures on vessel

	SB9. analyse situations to assess threats or risks
	<b>Critical thinking</b>
	The user/individual on the job needs to know and understand how to: SB10. ensure right safety measures and security protocols are followed at all times

## NOS Version Control

NOS Code	LSC/N4102		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	30/06/2018
Industry Sub-sector	Gene	Last reviewed on	28/03/2019
Occupation	Vessel Operations	Next review date	28/03/2022

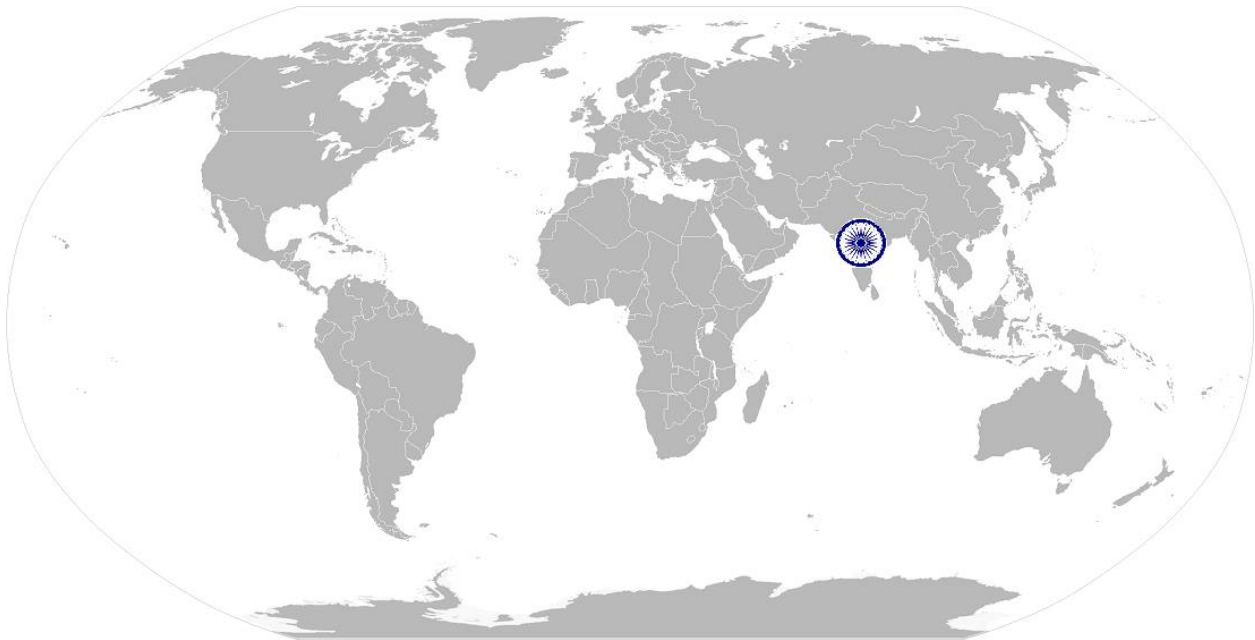


**LSC/N4109**

**Manage Near Coastal Vessel (NCV) operations**

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# National Occupational Standard



## Overview

This unit is about performing near shore operations

LSC/N4109

Manage Near Coastal Vessel (NCV) operations

National Occupational Standard

<b>Unit Code</b>	<b>LSC/N4109</b>
<b>Unit Title (Task)</b>	<b>Manage near coastal vessel (NCV) operations</b>
<b>Description</b>	This unit is about operating coastal vessels
<b>Scope</b>	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>Perform vessel handling and navigation</li> <li>Perform cargo handling</li> </ul> <p>Range: NCV, navigation charts and aids, simulator, worksheets, stationery, computer, projector etc.</p>
<b>Performance Criteria(PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Perform vessel handling and navigation</b>	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. use buoyage system and landmarks to identify navigational routes</p> <p>PC2. calculate distances and vessel positions in mercator chart</p> <p>PC3. use celestial spheres, poles and medians to identify position and direction</p> <p>PC4. navigate the vessel using radars, mercator maps, buoys, landmarks, compass and celestial bodies as reference</p> <p>PC5. use Global Positioning System (GPS) and Electronics Charts Display and Information System (ECDIS) for navigation</p> <p>PC6. coordinate and make course corrections as required based on navigational inputs</p> <p>PC7. use echo sounders for speed measurement and control</p> <p>PC8. read barometers, thermometers, Beaufort scale for wind force, etc. to estimate weather conditions, atmospheric pressure and wind speed for navigation</p> <p>PC9. manoeuvre the vessel through rough seas, shallow waters, making large and immediate turns factoring in stability, centre of gravity, angle of loll, wind speed, waves, currents and weather conditions considering</p>
<b>Perform cargo handling</b>	<p>To be competent, the user/ individual must be able to:</p> <p>PC10. coordinate loading and unloading of cargo</p> <p>PC11. authorise and inspect cleaning and preparation of hold for dry bulk cargo</p> <p>PC12. use dunnage and spar ceiling to prevent cargo contamination</p> <p>PC13. review blocking, tombing and lashing for securing cargo pallets and barrels</p> <p>PC14. Inspect rigging and lashing for heavy cargo and vehicles</p> <p>PC15. take adequate precautions, segregate and secure dangerous cargo with respect to personal and vessel safety as well as marine pollution</p> <p>PC16. Plug in and maintaining reefer cargo onto the vessel</p> <p>PC17. review cleaning and maintenance of oil tanks, piping arrangement and pumps during voyage</p>

**LSC/N4109**

**Manage Near Coastal Vessel (NCV) operations**

Knowledge and understanding (K)	
<b>A. Organizational context</b> (Knowledge of the company / organization and its processes)	<p>The individual on the job needs to know:</p> <p>KA1. organizational procedures and SOPs for tasks at hand, documentation policy and emergency responses, internal communication over network</p> <p>KA2. security and safety procedures to be followed</p> <p>KA3. reporting structure of the organization for escalation of issues</p> <p>KA4. risk and impact of not following defined procedures/work instructions</p> <p>KA5. coding system followed to communicate using flags, hand signals and sound signals</p>
<b>B. Technical knowledge</b>	<p>The individual on the job needs to know and understand:</p> <p>KB1. different type of coastal vessel and their operations</p> <p>KB2. different type of hull and propulsion techniques</p> <p>KB3. use of different deck equipment for cargo and vessel operations</p> <p>KB4. navigation using celestial bodies, landmarks, radars, Mercator charts, etc.</p> <p>KB5. effect of ocean currents, waves, atmospheric pressure, etc. onto the weather, visibility and vessel stability</p> <p>KB6. different type of cargo and their handling SOPs</p> <p>KB7. emergency plans and contingency SOPs</p> <p>KB8. safety and survival techniques in the sea</p> <p>KB9. different coastal navigational routes and their limitations</p>
Skills (S)	
<b>A. Core skills/ generic skills</b>	<b>Reading skills</b>
	<p>The user/individual on the job needs to know how to read:</p> <p>SA1. written instructions</p> <p>SA2. maps and routes</p> <p>SA3. SOPs and operating manuals</p> <p>SA4. messages on various communication systems</p>
	<b>Writing skills</b>
	<p>The user/individual on the job needs to know how to:</p> <p>SA5. write instructions</p> <p>SA6. write reports and communications</p>
	<b>Oral communication (listening and speaking skills)</b>
	<p>The user/individual on the job needs to know how to:</p> <p>SA7. communicate with officers, port terminals, other vessels and co-workers</p> <p>SA8. collect information from officers</p>
<b>B. Professional skills</b>	<b>Decision making</b>
	<p>The user/individual on the job needs to know how to:</p> <p>SB1. decide on the navigation route and speed for vessels</p> <p>SB2. decide on the work allotment of crew on board</p>
	<b>Plan and organize</b>

**LSC/N4109**
**Manage Near Coastal Vessel (NCV) operations**

	The user/individual on the job needs to know how to: SB3. plan and estimate the time for each activity SB4. maintain punctuality and respond in a timely manner SB5. prioritize and execute tasks based on instructions SB6. be a team player and achieve joint goals
	<b>Customer centricity</b>
	The user/individual on the job needs to know and understand: SB7. importance of timeliness for operations and circulation of information SB8. urgency of priority requests as per the instructions
	<b>Problem solving</b>
	The user/individual on the job needs to know how to: SB9. inform the ranking in-charge regarding adverse observations in engine, navigation route, obstacles, etc. SB10. suggest make shift arrangements, trouble shooting, route alterations, etc.
	<b>Analytical thinking</b>
	The user/individual on the job needs to know how to: SB11. analyse the position of a vessel on the mercator and using navigational tools and landmarks SB12. analyse the speed and torque requirement for turning operations, vessel stability, etc. SB13. analyse weather conditions for fitness of operation
	<b>Critical thinking</b>
	The user/individual on the job needs to know how to: SB14. observe obstacles and dangerous operations by other vessels and take precautions SB15. assess weather and environment for performing on sea voyage SB16. focus on task at hand and complete it without errors and delays

## NOS Version Control

NOS Code	LSC/N4109		
Credits(NSQF)	5	Version number	1.0
Industry	Logistics	Drafted on	30/06/2018
Sub-Sector	Inland waterways	Last reviewed on	28/03/2019
Occupation	Vessel operations (Navigation, vessel planning)	Next review date	28/03/2022

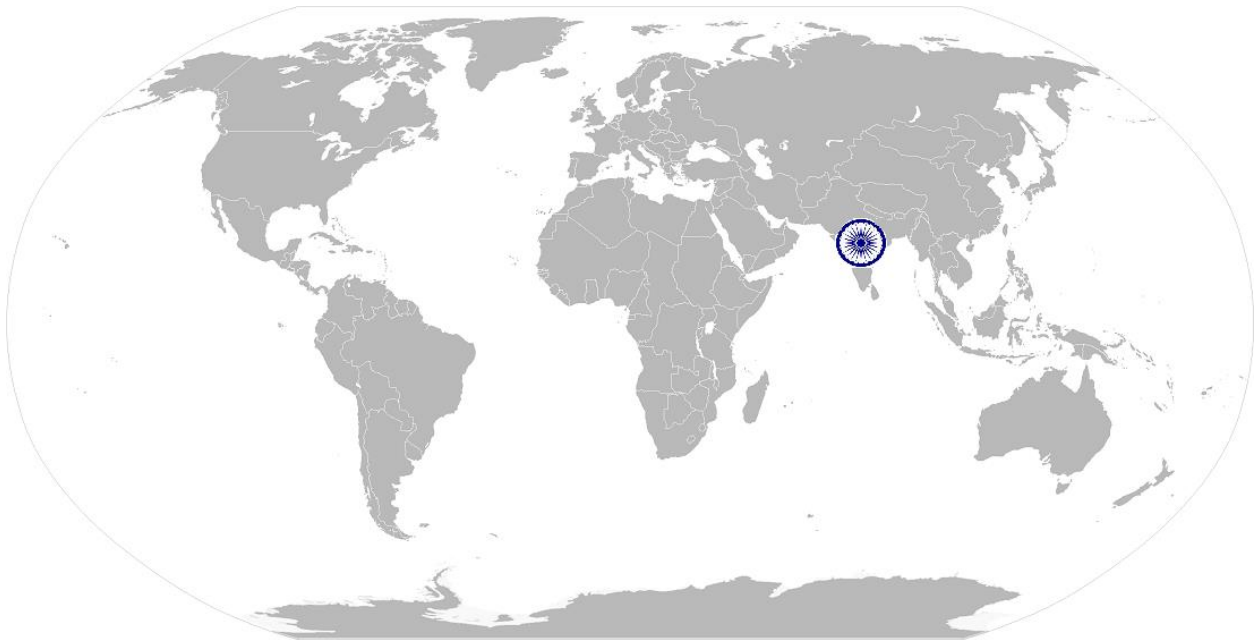


**LSC/N4106**

**Manage Tug Vessel operations**

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# National Occupational Standard



## Overview

This unit is about performing tug vessel operations

**LSC/N4106**

**Manage Tug Vessel operations**

National Occupational Standard

Unit Code	LSC/N4106
Unit Title (Task)	Perform tug vessel operations
Description	This unit is about performing tug vessel operations
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>Prepare for towing operation</li> <li>Towing of vessel</li> </ul> <p>Range: Tug vessel and its equipment, navigation aids, simulator, Standard Operating Procedures (SOP), worksheet,</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
<b>Prepare for towing operation</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. check the engine and power systems of tug boat for fitness with respect to operations and regulatory compliance</p> <p>PC2. check that the crew is certified for tug operations and have the requisite Personal Protective Equipment (PPEs)</p> <p>PC3. check that the towing gear and equipment - bollard, fairleads, sheaves, wires and ropes, etc. is in good condition and functional</p> <p>PC4. check that the towing equipment and vessel is suitable for towing the vessel</p> <p>PC5. prepare tow plan identifying the route to be taken and planned passage including safe time of operation during day and night factoring in obstacles, traffic, weather conditions, adjacent river and coastal berths, tight bends, tug connection to be used, etc.</p> <p>PC6. check for presence of sufficient fuel, water and spares on board</p> <p>PC7. check for navigational information and warnings</p> <p>PC8. identify the Bollard Pull (BP), the width and size of vessel to calculate the displacement and the speed for tug operations</p> <p>PC9. identify the pivot point for towing based on currents, weather, etc. for safe and stable towing of the vessel</p> <p>PC10. estimate the position of tug vessel with respect to the towed vessel factoring in the no. of tugs, pivot point, speed of towing, etc.</p> <p>PC11. estimate the number of tows required and the towing position based on the number of vessel and barges to be towed together</p>
<b>Towing the vessel</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC12. check that all emergency equipment and emergency plan is in place</p> <p>PC13. check that all watertight hatches and doors are closed</p> <p>PC14. provide instructions to crew as per the towing plan</p> <p>PC15. check for stability of both vessels prior to commencement of operation</p> <p>PC16. move the tug vessel to the aft or forward point of the vessel to be towed factoring in the speed and suction for securing the tugs</p> <p>PC17. check with crew if the tug is connected and secured</p>

**LSC/N4106**

**Manage Tug Vessel operations**

	<p>PC18. carefully start the tug vessel and apply power to displace water for moving the vessel to be towed, taking precautions against the water currents, girting, top-sizing, capsizing, etc.</p> <p>PC19. make adjustments for obstacles, wind speed and currents, traffic factoring the girting, vessel speed, etc.</p> <p>PC20. regularly check during operations if the towing arrangement and watertight integrity of the tow are satisfactory</p> <p>PC21. prepare for and address emergency towing scenarios as per the emergency towing SOP in case of loss of tow wire</p> <p>PC22. navigate the towed vessel to the destination and slowly brake factoring the vessel inertia to prevent capsizing or girting</p> <p>PC23. dis-engage the tow from the vessel</p>
<b>Knowledge and understanding (K)</b>	
<b>A. Organizational context</b>	<p>The individual on the job needs to know:</p> <p>KA1. organizational procedures and SOPs for tasks at hand, documentation policy and emergency responses, internal communication over network</p> <p>KA2. security and safety procedures to be followed</p> <p>KA3. reporting structure of the organization for escalation of issues</p> <p>KA4. risk and impact of not following defined procedures/work instructions</p> <p>KA5. coding system followed to communicate using flags, hand signals and sound signals</p>
<b>B. Technical knowledge</b>	<p>The individual on the job needs to know and understand:</p> <p>KB1. different type of tug boats and their operations</p> <p>KB2. different type of tug connections – hawser based, Integrated unit, articulated unit, etc. and their benefits</p> <p>KB3. use of different tug equipment - bollards, fairleads, sheaves, wires, tow connections, etc. and their uses</p> <p>KB4. effect of ocean and river currents, weather, suction from towed vessel and other environmental factors that can impact towing of vessel</p> <p>KB5. responsibility, manning, certification and training of tug vessel and crew</p> <p>KB6. use of PPEs, making tow plans and emergency plans and SOP for contingencies</p> <p>KB7. mooring operating using tug vessels</p> <p>KB8. understanding of vessel safety during tug, girting, pivot points, Bollard pull, position for vessel towing, displacement and speed calculations, etc.</p> <p>KB9. coastal and inland navigational routes for tug vessels and their limitations</p>
<b>Skills (S)</b>	
<b>C. Core skills/ generic skills</b>	<p><b>Reading skills</b></p> <p>The user/individual on the job needs to know how to read:</p> <p>SA1. written instructions</p> <p>SA2. maps and routes</p> <p>SA3. SOPs and operating manuals</p>

**LSC/N4106**

**Manage Tug Vessel operations**

	SA4. messages on various communication systems
	<b>Writing skills</b>
	The user/individual on the job needs to know how to: SA5. write instructions SA6. write daily reports
	<b>Oral communication (listening and speaking skills)</b>
	The user/individual on the job needs to know how to: SA7. communicate with officers, port terminals, other vessels and co-workers SA8. collect information from officers
<b>D. Professional skills</b>	<b>Decision making</b>
	The user/individual on the job needs to know how to: SB1. decide on the navigation route and speed for vessels SB2. decide on the work allotment of crew on board
	<b>Plan and organize</b>
	The user/individual on the job needs to know how to: SB3. plan and estimate the time for each activity SB4. maintain punctuality and respond in a timely manner SB5. prioritize and execute tasks based on instructions SB6. be a team player and achieve joint goals
	<b>Customer centricity</b>
	The user/individual on the job needs to know and understand: SB7. importance of timeliness for operations and circulation of information SB8. urgency of priority requests as per the instructions
	<b>Problem solving</b>
	The user/individual on the job needs to know how to: SB9. inform the ranking in-charge regarding adverse observations in engine, navigation route, obstacles, etc. SB10. suggest make shift arrangements, trouble shooting, route alterations, etc.
	<b>Analytical thinking</b>
	The user/individual on the job needs to know how to: SB11. analyse the position of a vessel or obstacle on the map and its estimated route SB12. analyse the speed and torque for a certain tug operation based on vessel size and terrain of river/ ocean bed
	<b>Critical thinking</b>
	The user/individual on the job needs to know how to: SB17. observe obstacles and dangerous operations by other vessels and take precautions SB18. assess weather and environment for performing a tug operation

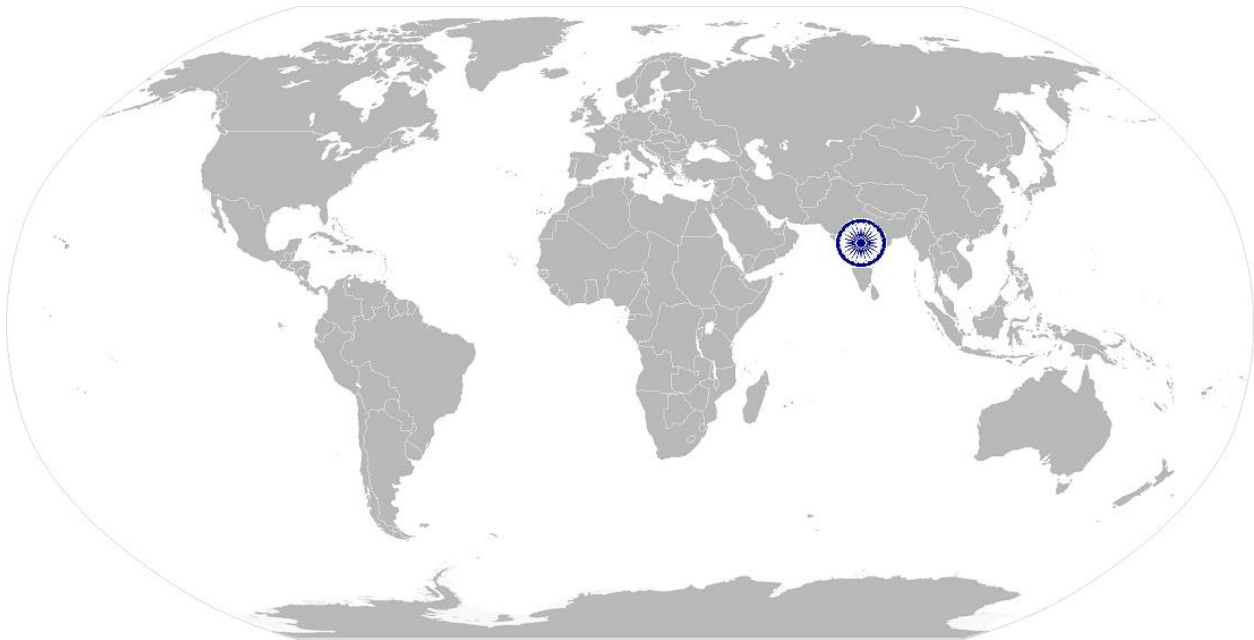
## LSC/N4106

## Manage Tug Vessel operations

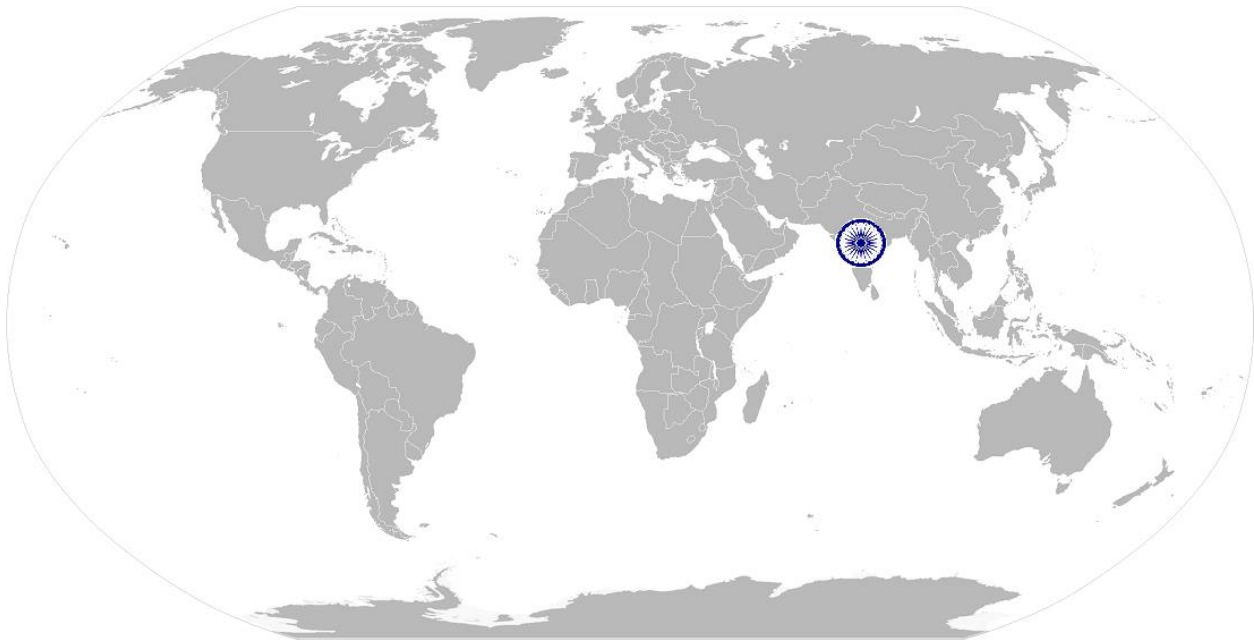
	SB19. focus on task at hand and complete it without errors and delays
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## NOS Version Control

NOS Code	LSC/N4106		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	30/06/2018
Industry Sub-sector	Inland waterways	Last reviewed on	28/03/2019
Occupation	Vessel Operations	Next review date	28/03/2022



# National Occupational Standard



## Overview

This unit is about managing passenger vessel operations



**LSC/N3902**

**Manage Passenger Vessel operations**

**National Occupational Standard**

Unit Code	LSC/N3902
Unit Title (Task)	Manage passenger vessel operations
Description	This unit is about undertaking duties in a passenger ship
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>Plan and manage catering services</li> <li>Plan and manage facilities and housekeeping services</li> <li>Plan for security and difficult terrains</li> </ul> <p>Range: Passenger vessel, Management information system (MIS), budgeting and planning documents, supervision checklists, fire-fighting equipment, life jackets, raft boats, Standard Operating Procedures (SOP), computer, projector, stationery, worksheets, etc.</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
<b>Plan and manage catering services</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. identify and stock catering staff based on estimated number of guests</p> <p>PC2. tie up with onshore units for supply of prepared and raw food and other related items</p> <p>PC3. check and train the catering staff for hospitality services</p> <p>PC4. inspect and ensure that kitchen is neat and clean and free from insects and rodents</p> <p>PC5. check that all food items are properly secured and stored in a hygienic manner</p> <p>PC6. check that necessary fire prevention systems and emergency controls and precautions are taken</p> <p>PC7. check if additional customized services can be provided to enhance experience</p> <p>PC8. develop restaurant and sitting areas with ambient lighting, music, facilities, etc.</p>
<b>Plan and manage facilities and housekeeping services</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC9. plan for housekeeping requirement and check on facilities available in the vessel</p> <p>PC10. create tie-ups for repair and maintenance of various facilities like public seating, gym, entertainment room, games, etc.</p> <p>PC11. check the records of housekeeping and cleaning services for complaints and daily performance</p> <p>PC12. collect feedback from passengers on their experience</p>
<b>Plan for security and difficult terrains</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC13. instruct and train the crew for thorough check of documents and baggage prior to boarding</p> <p>PC14. maintain vigil during stops at jetties, boarding and dis-embarking points with respect to passengers onboarding and going off the vessel</p> <p>PC15. maintain vigil with regards to hazardous and dangerous operations ongoing in nearby vessels and take precautions accordingly</p>

**LSC/N3902**

**Manage Passenger Vessel operations**

	<p>PC16. check for lifeguards and fall protection along the vessel</p> <p>PC17. check that adequate number of life jackets and raft boats are present always</p> <p>PC18. check that passenger vehicles and cargo are securely stowed and discharged from the vessel</p>
<b>Knowledge and understanding (K)</b>	
<b>A. Organizational context</b>	<p>The individual on the job needs to know:</p> <p>KA1. organizational procedures and SOPs for tasks at hand, documentation policy and emergency responses, internal communication over network</p> <p>KA2. security and safety procedures to be followed</p> <p>KA3. reporting structure of the organization for escalation of issues</p> <p>KA4. risk and impact of not following defined procedures/work instructions</p> <p>KA5. coding system followed to communicate using flags, hand signals and sound signals</p>
<b>B. Technical knowledge</b>	<p>The individual on the job needs to know and understand:</p> <p>KB1. different type of passenger and cruise vessels and their operations</p> <p>KB2. different screening and documentation for passengers and their baggage</p> <p>KB3. catering requirement and facilities that can be made available on the vessel</p> <p>KB4. use of different life saving equipment and raft boats</p> <p>KB5. responsibility of safety and security of on board passengers</p> <p>KB6. emergency plan and escape routes for passengers</p> <p>KB7. coastal and inland river routes and navigational aids</p> <p>KB8. various security risks associated with dangerous operations, passing vessels, unfamiliar areas, terrorism and vessel pirates, etc.</p> <p>KB9. Housekeeping and catering needs aboard the vessel</p> <p>KB10. Inventory and record keeping for stores</p>
<b>Skills (S)</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Reading skills</b>
	<p>The user/individual on the job needs to know how to read:</p> <p>SA1. written instructions</p> <p>SA2. maps and routes</p> <p>SA3. SOPs and operating manuals</p> <p>SA4. messages on various communication systems</p>
	<b>Writing skills</b>
	<p>The user/individual on the job needs to know how to:</p> <p>SA5. write instructions</p> <p>SA6. write daily reports</p>
	<b>Oral communication (listening and speaking skills)</b>
	<p>The user/individual on the job needs to know how to:</p> <p>SA7. communicate with officers, port terminals, other vessels, passengers and co-workers</p>

**LSC/N3902**

**Manage Passenger Vessel operations**

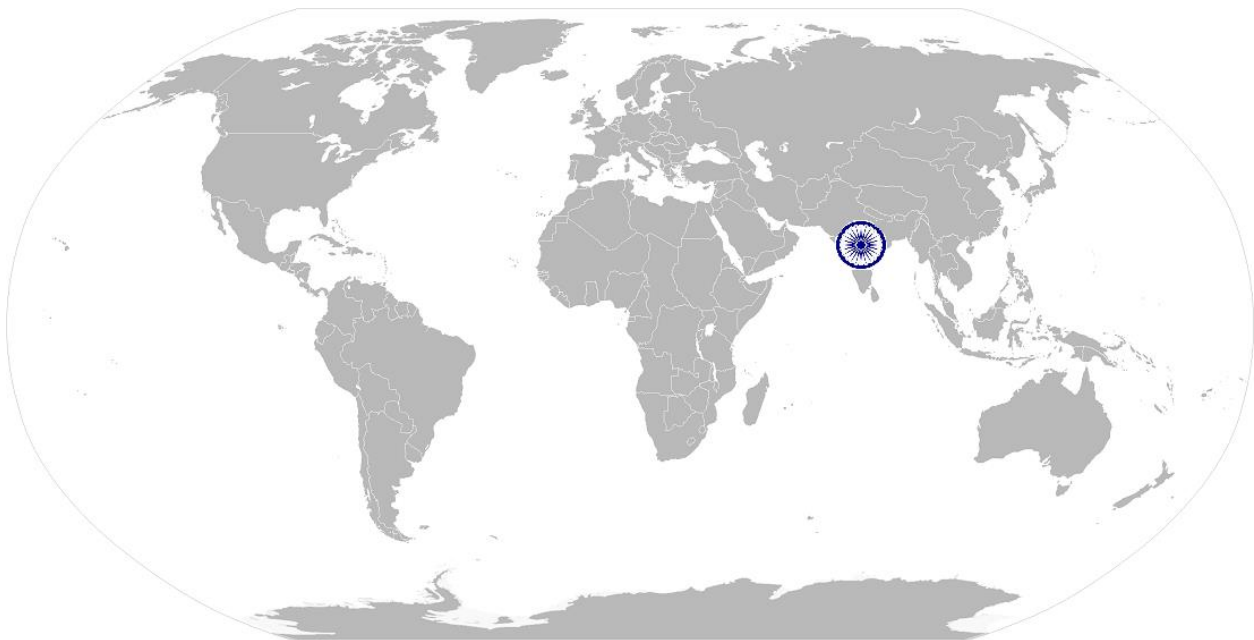
	SA8. collect information from officers
<b>B. Professional Skills</b>	<b>Decision making</b>
	The user/individual on the job needs to know how to:
	SB1. decide on the navigation route and speed for vessels
	SB2. decide on the work allotment of crew on board
	SB3. decide on changes in catering and housekeeping or entertainment facilities if required
	SB4. decide on replenishment of stores and places to dis-embark and anchor vessels
	<b>Plan and organize</b>
	The user/individual on the job needs to know how to:
	SB5. plan and estimate the time for each activity
	SB6. maintain punctuality and respond in a timely manner
	SB7. prioritize and execute tasks based on instructions
	SB8. be a team player and achieve joint goals
	<b>Customer centricity</b>
	The user/individual on the job needs to know and understand:
	SB9. importance of timeliness for operations and circulation of information
	SB10. urgency of priority requests as per the instructions
	<b>Problem solving</b>
	The user/individual on the job needs to know how to:
	SB11. inform the ranking in-charge regarding adverse observations in engine, navigation route, obstacles, etc.
	SB12. suggest make shift arrangements, trouble shooting, route alterations, etc.
	SB13. suggest changes in scheduled stops to cater to immediate supply requirements
	<b>Analytical thinking</b>
	The user/individual on the job needs to know how to:
	SB14. analyse the position of a vessel or obstacle on the map and its estimated route
	SB15. analyse the facilities provided and possible improvement
	<b>Critical thinking</b>
	The user/individual on the job needs to know how to:
	SB16. observe dangerous operations by other vessels and take precautions
	SB17. assess weather and environment for passenger vessel voyage
	SB18. focus on task at hand and complete it without errors and delays

**LSC/N3902**

**Manage Passenger Vessel operations**

**NOS Version Control**

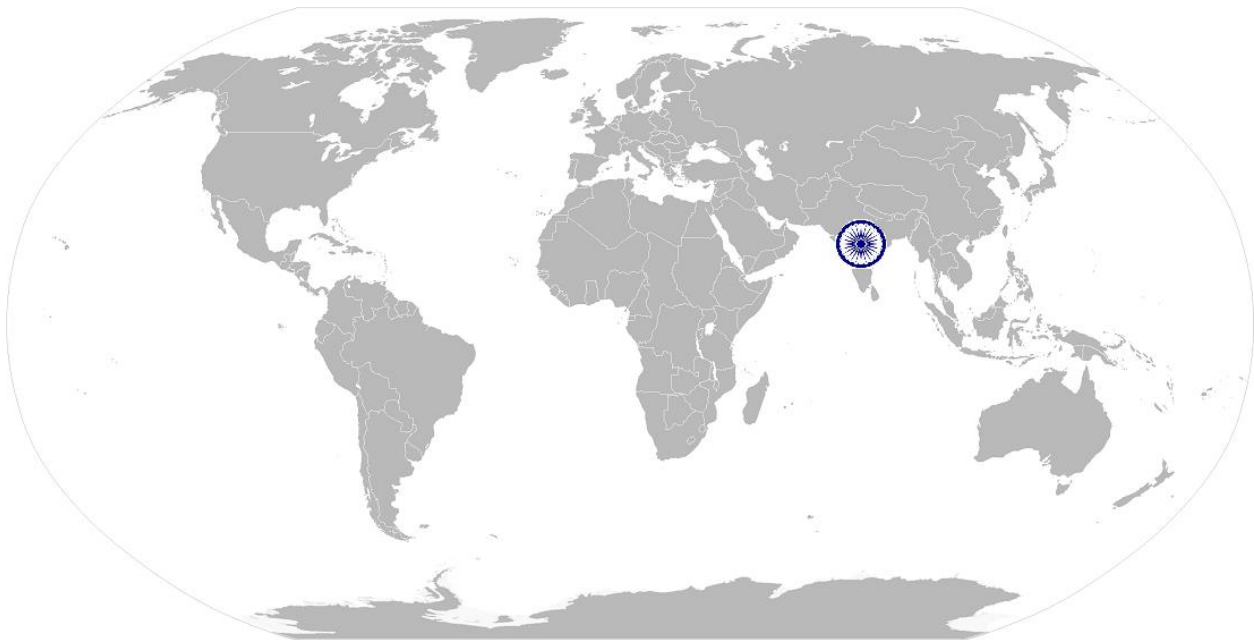
NOS Code	LSC/N3902		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	30/06/2018
Industry Sub-sector	Inland Waterways	Last reviewed on	28/03/2019
Occupation	Passenger services	Next review date	28/03/2022



**LSC/N3511****Perform ship and yard planning**

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# National Occupational Standard



## Overview

This unit is about planning the container and cargo storage in the yard and overseeing movement operations



LSC/N3511

Perform ship and yard planning

National Occupational Standard

<b>Unit Code</b>	<b>LSC/N3511</b>
<b>Unit Title (Task)</b>	<b>Perform ship and yard planning</b>
<b>Description</b>	This unit is about about container tracking and developing vessel berthing plans
<b>Scope</b>	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>Plan yard to receive cargo</li> <li>Inspect yard to check for space utilization, segregation of cargo, cleanliness, necessary precautions</li> </ul> <p>Range: Stationery, Standard Operating Procedures (SOP), Radio-Frequency Identification (RFID) scanner, bar code scanner, markers, Personal Protective Equipment (PPEs), Enterprise Resource Planning (ERP), computer, display board, printer, Material Handling Equipment (MHEs), etc</p>
<b>Performance Criteria(PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Plan yard to receive cargo</b>	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. obtain information regarding the vessel details - docking schedule and berth, bays and containers to be unloaded and loaded</p> <p>PC2. obtain information regarding movement of containers / cargo from port terminals to Container Freight Stations (CFS)/ Inland Container Depots (ICD) or client</p> <p>PC3. check yard's capacity utilization and open bays and locations</p> <p>PC4. assess the quantity of cargo to be moved and plan storage space for cargo</p> <p>PC5. allocate resources for cargo movement</p> <p>PC6. communicate the task at hand to cargo equipment handlers, manual cargo handlers and lifting and vessel supervisors</p> <p>PC7. discuss the plan for cargo movement with the operators to finalise the container/ cargo movement plan</p> <p>PC8. review that all equipment and workforce is ready for operations at the time of vessel docking / transport arrival</p> <p>PC9. review that the necessary precautions and PPEs have been taken</p> <p>PC10. deploy resources for loading/ unloading as per cargo stowage plan</p> <p>PC11. coordinate with cargo surveyor for safe and secured loading/ unloading</p>
<b>Inspect yard to check for space utilization, segregation of cargo, cleanliness, necessary precautions</b>	<p>To be competent, the user/ individual must be able to:</p> <p>PC12. conduct periodic inspections of the yard</p> <p>PC13. check for cleanliness, adequate use of PPEs, regulations and norms for workforce are clearly followed</p> <p>PC14. check that cargo bays are clearly marked and segregated, containers and cargo are stored as per prescribed norms</p> <p>PC15. check that equipment are parked are right positions</p>



**LSC/N3511**

**Perform ship and yard planning**

	<p>PC16. check that all necessary precautions for storage of hazardous cargo is in place including emergency services</p> <p>PC17. prepare inspection report highlighting any anomaly or changes, as required</p>
<b>Knowledge and understanding (K)</b>	
<b>B. Organizational context</b> (Knowledge of the company / organization and its processes)	<p>The individual on the job needs to know and understand:</p> <p>KA1. organizational procedures and SOPs for tasks at hand, documentation policy and emergency responses</p> <p>KA2. security and safety procedures to be followed</p> <p>KA3. reporting structure of the organization and the supplier for escalation of issues</p> <p>KA4. risk and impact of not following defined procedures/work instructions</p> <p>KA5. coding system followed for different type of cargo and their distress codes</p>
<b>B. Technical knowledge</b>	<p>The individual on the job needs to know and understand:</p> <p>KB1. basics of operations in a port terminal, ICD and CFS</p> <p>KB2. use of various cargo handling equipment</p> <p>KB3. use of rope, flags and other manual equipment</p> <p>KB4. vessel layout and loading and unloading activities</p> <p>KB5. procedures of tank cleaning, cargo movement</p> <p>KB6. requirements regarding handling of cargo</p> <p>KB7. different type of vessels and cargo and container sizes</p> <p>KB8. different type of cranes and MHEs – their capacities, constraints and usage</p> <p>KB9. handling of hazardous and non-hazardous cargo</p> <p>KB10. marking of material and people movement areas</p> <p>KB11. stuffing and de-stuffing norms with respect to different cargo</p> <p>KB12. special characteristics and handling requirements of shipments, if any</p>
<b>Skills (S)</b>	
<b>C. Core skills/ generic skills</b>	<b>Reading skills</b>
	<p>The user/individual on the job needs to know how to read:</p> <p>SA1. written instructions</p> <p>SA2. shipping manifest, Bill of lading shipping bills and related documents</p> <p>SA3. ERP and computer generated reports</p> <p>SA4. cargo stowage plans and vessel plans</p> <p>SA5. SOPs and safety regulation manuals</p>
	<b>Writing skills</b>
	<p>The user/individual on the job needs to know how to write:</p> <p>SA6. work-orders and instructions</p> <p>SA7. checklist of activities, delays, undelivered items, contacts, etc</p> <p>SA8. daily reports</p>
	<b>Oral communication (listening and speaking skills)</b>

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Perform ship and yard planning

	<p>The user/individual on the job needs to know how to:</p> <p>SA9. communicate with customers, fireght operators, transporters, shipping companies, other supervisors and port authorities</p> <p>SA10. communicate with cargo equipment operators and ground staff over Very High Frequency (VHF) radio</p> <p>SA11. guide cargo handlers for smooth operations</p>
<b>D. Professional skills</b>	<p><b>Decision making</b></p> <p>The user/individual on the job needs to know how to:</p> <p>SB1. decide on required workforce and equipment for performing a particular task</p> <p>SB2. assess the environmental condition and type of cargo to assess if it is safe for operations</p> <p>SB3. resolve a problem quickly internally</p> <p>SB4. prioritise shipments</p> <p>SB5. decide on deployment of alternate resources when required</p> <p><b>Plan and organize</b></p> <p>The user/individual on the job needs to know how to:</p> <p>SB6. plan and estimate the co-ordination required for resolving a query.</p> <p>SB7. maintain punctuality</p> <p>SB8. respond to the client in a timely manner</p> <p>SB9. prioritize and execute tasks based on client requirements</p> <p>SB10. make work plans and resource allocation plans</p> <p>SB11. make checks on execution of work plans</p> <p>SB12. be a team player and achieve joint goals</p> <p><b>Customer centricity</b></p> <p>The user/individual on the job needs to know how to:</p> <p>SB13. adhere to the customer timelines</p> <p>SB14. address the urgency regarding shipments and activities</p> <p><b>Problem solving</b></p> <p>The user/individual on the job needs to know how to:</p> <p>SB15. make adjustment to working requirements for difficult weathers and hazardous goods</p> <p>SB16. identify trends/common causes for delays, damages, etc.</p> <p>SB17. co-ordinate and handle major issues with different departments</p> <p>SB18. identify bottlenecks and operational problems and suggest remedial action</p> <p><b>Analytical thinking</b></p> <p>The user/individual on the job needs to know how to:</p> <p>SB19. assess the resource requirement for a particular task at hand</p> <p>SB20. assess and prepare for backup resources in case of delays</p> <p>SB21. plan for cargo movement so that the resources and stroage space is optimally utilised</p>

## LSC/N3511

## Perform ship and yard planning

	Critical thinking
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB22. resolve issues in a quick and cost effective manner</p> <p>SB23. develop work plans factoring in external factors</p> <p>SB24. check that all security measures and safety protocols are followed at all times</p>

## NOS Version Control

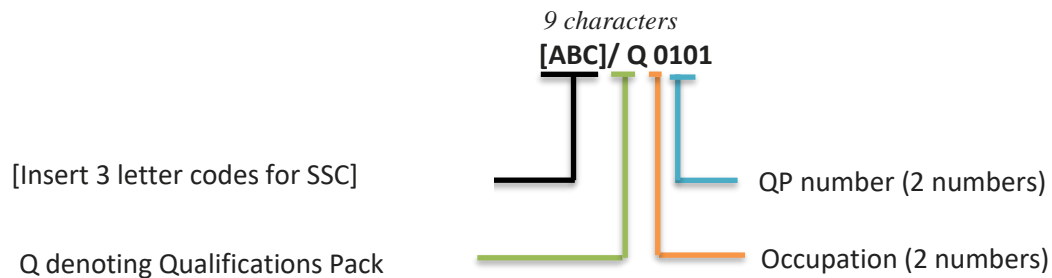
NOS Code	LSC/N3511		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	30/06/2018
Industry Sub-sector	Port terminals, CFS and ICDs	Last reviewed on	28/03/2019
Occupation	Port Operation & Management	Next review date	28/03/2022



## Annexure

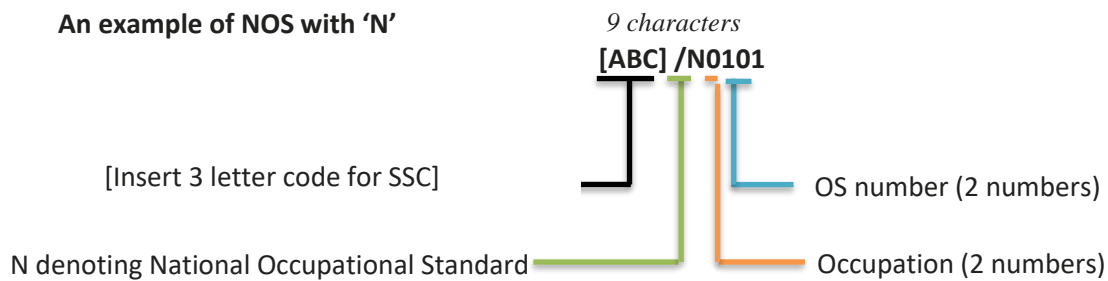
### Nomenclature for QP and NOS

#### Qualifications Pack



#### Occupational Standard

##### An example of NOS with 'N'



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*Qualification pack for Vessel Operator Grade 3*

The following acronyms/codes have been used in the nomenclature above:

Sub-sector	Range of Occupation numbers
Warehousing	1 to 9
Land Transportation	10 to 14
EXIM/ Freight Forwarding/ Customs Clearance	21 to 23
Courier/Express	15 to 20
E-Commerce	24 to 30
Supply Chain	31 to 34
Port Terminals, ICD and CFS	35 to 41
Inland Waterways	42 to 46
Liquid Logistics	47 to 49
Air Cargo Operations	61 to 62
Rail Logistics	50 to 55
Cold Chain Logistics	86 to 94
Generic Occupations	95 to 99

Sequence	Description	Example
Three letters	Industry name	LSC
Slash	/	/
Next letter	Whether QP or NOS	Q / N
Next two numbers	Occupation code	01
Next two numbers	OS number	01

*Qualification pack for Vessel Operator Grade 3*  
**CRITERIA FOR ASSESSMENT OF TRAINEES**

**Job Role** Vessel Operator Grade 3

**Qualification Pack** LSC/Q4103

**Sector Skill Council** Logistics

**Guidelines for Assessment**

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below)
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criterion
5. To pass the Qualification Pack, every trainee should score a minimum of 70% in every NOS
6. In case of unsuccessful completion, the trainee may seek re-assessment on the Qualification Pack

<b>Compulsory NOS</b>					
<b>Total Marks: 700</b>				<b>Marks Allocation</b>	
<b>Assessment Outcomes</b>	<b>Assessment Criteria for Outcomes</b>	<b>Total Marks</b>	<b>Out of</b>	<b>Theory</b>	<b>Skills Practical</b>
<b>LSC/N4107 Plan and oversee operations</b>	PC1. assess if the vessel is fit and equipped to perform the specified task	<b>100</b>	10	3	7
	PC2. develop vessel's sailing plan based on transport and travel requirements, using the map and navigation aids, factoring in weather and tide forecasts		10	3	7
	PC3. coordinate with port authorities, clients, shipping agents, etc. to finalize details regarding route, cargo, ETA, costs and continuous update on vessel position and status		10	3	7
	PC4. check for availability of adequate equipment, ration, stores, spares, life jackets and PPEs factoring in buffer for unforeseen circumstances		10	3	7
	PC5. order the master/ crew to execute the planned route		8	2	6
	PC6. work out expected time of arrival (ETA)		6	2	4
	PC7. communicate and update the		6	2	4



*Qualification pack for Vessel Operator Grade 3*

	port on the progress of the vessel				
	PC8. review and approve the task allocation plan prepared by masters for engine, catering, deck and cargo operation		8	2	6
	PC9. coordinate with shipper, surveyor and port for cargo discharge and loading and provide sign-off		6	2	4
	PC10. take regular update on engine room operations, cargo security and navigation of vessel during operations		8	2	6
	PC11. guide and approve major overhauls and course corrections as required		6	2	4
	PC12. devise emergency strategy, oversee emergency drills, and review inspection reports for emergency equipment		6	2	4
	PC13. check update on inventory and stock and make arrangement for replenishment		6	2	4
			<b>100</b>	<b>30</b>	<b>70</b>
<b>LSC/N4108 Inspect and maintain vessel and equipment</b>	PC1. check daily report of engineers and engine crew regarding engine and auxiliary machine operations	<b>100</b>	12	4	8
	PC2. conduct an inspection of engine room to check for cleanliness, availability of adequate fuel, functioning of exhausts, working condition		12	4	8
	PC3. conduct a trial run of engines and auxiliary part to check for troubles, repairs, etc.		12	4	8
	PC4. order a full maintenance check including greasing, painting and other preventive maintenance based on inspection		11	3	8
	PC5. oversee external repairs, servicing and overhauling parts and equipments		11	3	8
	PC6. check daily report of master and deck crew regarding status of deck equipment and deck facility		11	3	8
	PC7. conduct an inspection of deck to check for cleanliness, missing paint jobs, corrosion, fractures, working condition, presence of emergency equipment, etc.		11	3	8

*Qualification pack for Vessel Operator Grade 3*

	PC8. check the functioning of anchors and steering units		11	3	8
	PC9. review order maintenance including greasing, painting and carpentry for preventive maintenance of deck and deck equipment based on inspection		9	3	6
			<b>100</b>	<b>30</b>	<b>70</b>
<b>LSC/N9701 Business development and stakeholder relations</b>	PC1. obtain a list of existing clients and new prospects from the company's sales database.	<b>100</b>	7	2	5
	PC2. prepare sales targets and relationship strategies		7	2	5
	PC3. prioritize the clients for contacting, based on the previous relationship building calls made to each of them		7	2	5
	PC4. call clients and prospects to seek meeting		5	1	4
	PC5. meet client to offer new services and take feedback for current services		5	1	4
	PC6. identify client's business need and offer customized and bundled solutions		5	2	3
	PC7. negotiate on costs, close the deal and collect organizational and payment details of the client		5	2	3
	PC8. take client's feedback before leaving		5	1	4
	PC9. update information into ERP, inform the relevant departments on sale closure		5	2	3
	PC10. regularly interact with the client over phone, emails or personal visits		5	2	3
	PC11. address the query raised by the customers effectively and timely		5	2	3
	PC12. take appropriate actions on escalations raised by customers		5	2	3
	PC13. handle customer grievances		5	2	3
	PC14. quickly respond to the clients for their e-mails, voice-messages, calls, etc.		5	1	4
	PC15. provide regular information to clients regarding new offerings, discounts, customised solutions, etc.		5	1	4

*Qualification pack for Vessel Operator Grade 3*

	PC16. liaise with customs, other Govt. departments, PGAs, etc. and build professional relations with them		5	1	4
	PC17. analyse and manage claim requests		5	1	4
	PC18. co-ordinate with marketing agencies for publicity of services of the company		3	1	2
	PC19. negotiate with carriers, warehouse and transport operators, custom brokers, insurance company representatives, vendors, etc. for services, preferential rates, service level agreements (SLA), payment period, etc.		3	1	2
	PC20. co-ordinate with labour contractor and local vendors for sufficient workforce, carrier vehicle availability as per work demand		3	1	2
			<b>100</b>	<b>30</b>	<b>70</b>
<b>LSC/N9602 Review performance and develop performance improvement plan</b>	PC1. analyse activity related performance metrics	<b>100</b>	5	2	3
	PC2. review output reports for escalated cases to identify reasons		5	2	3
	PC3. review asset utilization rates and revenue per manpower		5	2	3
	PC4. analyse trend of defaults, delays, etc. along with their reasoning		5	1	4
	PC5. analyse the trends of various output metrics like average time per case, average number delays per week, etc. to measure operational performance		5	1	4
	PC6. analyse reasons for non-performance with respect to each operation and department		4	1	3
	PC7. identify process improvement areas and departments		5	2	3
	PC8. identify training needs and develop training plans		5	2	3
	PC9. analyse resource utilization trends to arrive at cases of under-utilization and poor equipment management		3	1	2
	PC10. examine staff turnover issues		4	1	3
	PC11. identify the department and staffs that are underperforming and take necessary actions to improve performance		4	1	3

*Qualification pack for Vessel Operator Grade 3*

	PC12. prioritise performance improvement project implementation		4	1	3
	PC13. develop strategic action plans to increase overall worker and operational efficiency		4	1	3
	PC14. communicate performance improvement benefits to senior management and take their approval		4	1	3
	PC15. establish key performance indicators, track regular performance output with respect to set goals and take corrective actions		4	1	3
	PC16. address all employee performance problems promptly and directly in accordance with personnel policies		4	1	3
	PC17. take necessary action in case of theft or fiddling with the shipment		4	1	3
	PC18. develop, implement, and manage departmental policies, procedures, standards and strategies as required		4	1	3
	PC19. set objectives and provide support to team members		4	1	3
	PC20. communicate and emphasise on policies and standards in line with the regulations laid down by various governing Acts		4	1	3
	PC21. guide and support them to cope with work load		3	1	2
	PC22. conduct meetings with staff to assess group's overall performance; discuss ideas for improvement and inform staff of new developments		4	1	3
	PC23. support team members in identifying, developing and implementing new ideas		3	1	2
	PC24. direct the hiring, training, and performance evaluations of staff		4	2	2
			<b>100</b>	<b>30</b>	<b>70</b>
<b>LSC/N9603 Profit and loss account management and cost accounting</b>	PC1. review department wise budgets and make amendments if required	<b>100</b>	8	3	5
	PC2. collate and prepare annual budgets along with sales and profit targets		8	3	5
	PC3. schedule both capital and operational expenses accordance to the		7	2	5

*Qualification pack for Vessel Operator Grade 3*

	budget				
	PC4. analyse and review the P&L performance for the unit		7	2	5
	PC5. analyse profitability and business performance trends department wise		7	2	5
	PC6. periodically analyse variances in the expenditure with respect to the budget and accordingly take corrective actions		7	2	5
	PC7. periodically analyse the physical output and performance with respect to the budget and identify places for improvements		7	2	5
	PC8. undertake adequate risk management so as to meet Key Performance targets		7	2	5
	PC9. manage and control budgets of different departments on a periodic basis to optimise financial performance		7	2	5
	PC10. periodically review activity and department financial performance		7	2	5
	PC11. identify the activities having high variance with respect to the budgeted costs or the forecasted revenue		7	2	5
	PC12. analyse the actual cost w.r.t physical output to draw inferences		7	2	5
	PC13. identify reasons in discussion with department and take remedial and corrective actions where-ever required		7	2	5
	PC14. work towards rationalizing the cost of the activity wise operations to achieve higher financial goals		7	2	5
			<b>100</b>	<b>30</b>	<b>70</b>
<b>LSC/N9904 Maintain integrity and ethics in logistics operations</b>	PC1. refrain from indulging in corrupt practices	<b>100</b>	5	2	3
	PC2. avoid using company's funds, property or resources for undertaking personal activities		5	2	3
	PC3. protect customer's information and ensure it is not misused		5	2	3
	PC4. protect data and information related to business or commercial decisions		5	2	3
	PC5. avoid acceptance of cash or kind from vendors for support or contract negotiations		5	2	3

*Qualification pack for Vessel Operator Grade 3*

	PC6. demonstrate and practice ethics in day-to-day processes and dealings with customers and colleagues		5	2	3
	PC7. avoid nepotism		5	2	3
	PC8. consult supervisor or senior management when in situations that may require differentiating between ethical and unethical		6	2	4
	PC9. report promptly all violations of code of ethics		5	2	3
	PC10. dress up and conduct in a professional manner		5	2	3
	PC11. communicate with clients and stakeholders in a soft and polite manner		5	2	3
	PC12. follow etiquettes in accordance to the place		5	2	3
	PC13. check for regulatory documentation and compliances for the shop floor as per information from the supervisor		6	2	4
	PC14. perform activities considering the regulatory requirements		5	2	3
	PC15. use PPEs in accordance to regulatory requirements		6	3	3
	PC16. identify the different types of dangerous goods and handling methodologies		6	3	3
	PC17. follow the SOP for handling of different types of dangerous goods		6	2	4
	PC18. consult supervisor or senior management when in situations that may require differentiating between ethical and unethical		5	2	3
	PC19. promptly report all regulatory violations		5	2	3
			<b>100</b>	<b>40</b>	<b>60</b>
<b>LSC/N4102 Follow and monitor health, safety and security procedures on vessel</b>	PC1. wear a life jacket and immersion suit	100	3	1	2
	PC2. safely jump from a height into the water		3	1	2
	PC3. swim while wearing lifejacket		3	1	2
	PC4. right an inverted life raft while wearing life jacket		3	1	2
	PC5. board a life raft or survival vessel from the vessel or the water while wearing life jacket		3	1	2
	PC6. keep afloat without life jacket		3	1	2



*Qualification pack for Vessel Operator Grade 3*

PC7. operate survival craft, life raft and its equipment and communication devices	3	1	2
PC8. assess the casualty and immediate medical needs and threat to own safety	3	1	2
PC9. position casualty and apply resuscitation techniques	4	2	2
PC10. apply measures to control bleeding, cover and secure burn injuries using bandages and emergency medical kit	3	1	2
PC11. apply measures for basic shock management	3	1	2
PC12. assist in rescue and transport of the casualty	3	1	2
PC13. take due precautions like – segregate and store, ensure proximity to firefighting equipment, etc. while storing inflammable materials on-board the vessel	3	1	2
PC14. regularly monitor the inflammable material and cargo for fire hazards	4	2	2
PC15. organise and maintain the firefighting equipment to make it easily accessible and operable during emergencies	4	2	2
PC16. check fire and smoke alarms for functionality	3	1	2
PC17. keep the emergency response routes and escape routes clear	4	2	2
PC18. use different protective equipment and high pressure breathing equipment	3	1	2
PC19. use different type of firefighting equipment to extinguish a fire, when required	3	1	2
PC20. participate in fire and emergency drills	3	1	2
PC21. inform and take appropriate action when discovering a potential emergency	3	1	2
PC22. recognize the emergency signal and respond as per the emergency plan	3	2	1
PC23. follow the designated escape routes	3	1	2

*Qualification pack for Vessel Operator Grade 3*

	PC24. follow safe and environmental friendly working practices		3	1	2
	PC25. follow precautions while entering closed areas and hazardous areas on-board the vessel		3	1	2
	PC26. maintain effective communications in person and while using vessel communication devices and systems		3	1	2
	PC27. follow vessel security plan		3	2	1
	PC28. identify security risks and threats, communicate and initiate action as per vessel security plan		4	2	2
	PC29. undertake regular vessel inspection with respect to vessel and cargo security		4	2	2
	PC30. check that all cargo containers, holds and hatches are secured		3	1	2
	PC31. check security equipment and system for functionality and maintenance		4	2	2
			<b>100</b>	<b>40</b>	<b>60</b>

<b>Electives</b>					
<b>Elective 1 - Near coastal vessel operations</b>					
<b>Total marks 100</b>				<b>Marks allocation</b>	
<b>Assessment outcome</b>	<b>Assessment criteria</b>	<b>Total marks</b>	<b>Out of</b>	<b>Theory</b>	<b>Skills Practical</b>
<b>LSC/N4109 Manage near coastal vessel(NCV) operations</b>	PC1. use buoyage system and landmarks to identify navigational routes	100	7	2	5
	PC2. calculate distances and vessel positions in mercator chart		7	2	5
	PC3. use celestial spheres, poles and medians to identify position and direction		7	2	5
	PC4. navigate the vessel using radars, mercator maps, buoys, landmarks, compass and celestial bodies as reference		7	2	5
	PC5. use GPS and Electronics Charts Display and Information System (ECDIS) for navigation		7	2	5
	PC6. coordinate and make course corrections as required based on navigational inputs		7	2	5
	PC7. use echo sounders for speed measurement and control		5	2	3
	PC8. read barometers, thermometers,		5	2	3

*Qualification pack for Vessel Operator Grade 3*

	Beaufort scale for wind force, etc. to estimate weather conditions, atmospheric pressure and wind speed for navigation				
	PC9. manoeuvre the vessel through rough seas, shallow waters, making large and immediate turns factoring in stability, centre of gravity, angle of loll, wind speed, waves, currents and weather conditions considering		5	2	3
	PC10. coordinate loading and unloading of cargo		5	1	4
	PC11. Authorise and inspect cleaning and preparation of hold for dry bulk cargo		7	2	5
	PC12. use dunnage and spar ceiling to prevent cargo contamination		5	1	4
	PC13. review blocking, tombing and lashing for securing cargo pallets and barrels		5	1	4
	PC14. Inspect rigging and lashing for heavy cargo and vehicles		5	1	4
	PC15. take adequate precautions, segregate and secure dangerous cargo with respect to personal and vessel safety as well as marine pollution		6	2	4
	PC16. Plug in and maintaining reefer cargo onto the vessel		6	2	4
	PC17. review cleaning and maintenance of oil tanks, piping arrangement and pumps during voyage		4	2	2
			<b>100</b>	<b>30</b>	<b>70</b>
<b>Elective 2 - Tug vessel operations</b>					
<b>Total marks 100</b>				<b>Marks allocation</b>	
<b>Assessment outcome</b>	<b>Assessment criteria</b>	<b>Total marks</b>	<b>Out of</b>	<b>Theory</b>	<b>Skills Practical</b>
<b>LSC/N4106 Perform Tug vessel operations</b>	PC1. check the engine and power systems of tug boat for fitness with respect to operations and regulatory compliance	100	6	2	4
	PC2. check that the crew is certified for tug operations and have the requisite PPEs		4	1	3
	PC3. check that the towing gear and equipment - bollard, fairleads, sheaves, wires and ropes, etc. is in good condition and functional		6	2	4

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PC4. check that the towing equipment and vessel is suitable for towing the vessel	6	2	4
PC5. prepare tow plan identifying the route to be taken and planned passage including safe time of operation during day and night factoring in obstacles, traffic, weather conditions, adjacent river and coastal berths, tight bends, tug connection to be used, etc.	6	2	4
PC6. check for presence of sufficient fuel, water and spares on board	4	2	2
PC7. check for navigational information and warnings	4	2	2
PC8. identify the Bollard Pull (BP), the width and size of vessel to calculate the displacement and the speed for tug operations	4	2	2
PC9. identify the pivot point for towing based on currents, weather, etc. for safe and stable towing of the vessel	4	1	3
PC10. estimate the position of tug vessel with respect to the towed vessel factoring in the no. of tugs, pivot point, speed of towing, etc.	4	1	3
PC11. estimate the number of tows required and the towing position based on the number of vessel and barges to be towed together	4	1	3
PC12. check that all emergency equipment and emergency plan is in place	4	1	3
PC13. check that all watertight hatches and doors are closed	4	1	3
PC14. provide instructions to crew as per the towing plan	4	1	3
PC15. check for stability of both vessels prior to commencement of operation	4	1	3
PC16. move the tug vessel to the aft or forward point of the vessel to be towed factoring in the speed and suction for securing the tugs	4	1	3
PC17. check with crew if the tug is connected and secured	4	1	3

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	PC18. carefully start the tug vessel and apply power to displace water for moving the vessel to be towed, taking precautions against the water currents, girting, top-sizing, capsizing, etc.		4	1	3
	PC19. make adjustments for obstacles, wind speed and currents, traffic factoring the girting, vessel speed, etc.		4	1	3
	PC20. regularly check during operations if the towing arrangement and watertight integrity of the tow are satisfactory		4	1	3
	PC21. prepare for and address emergency towing scenarios as per the emergency towing SOP in case of loss of tow wire		4	1	3
	PC22. navigate the towed vessel to the destination and slowly brake factoring the vessel inertia to prevent capsizing or girting		4	1	3
	PC23. dis-engage the tow from the vessel		4	1	3
			<b>100</b>	<b>30</b>	<b>70</b>
<b>Elective 3 - Passenger vehicle operations</b>					
<b>Total marks 100</b>				<b>Marks allocation</b>	
<b>Assessment outcome</b>	<b>Assessment criteria</b>	<b>Total marks</b>	<b>Out of</b>	<b>Theory</b>	<b>Skills Practical</b>
<b>LSC/N3902 Manage passenger vehicle operations</b>	PC1. identify and stock catering staff based on estimated number of guests	100	7	2	5
	PC2. tie up with onshore units for supply of prepared and raw food and other related items		3	1	2
	PC3. check and train the catering staff for hospitality services		7	2	5
	PC4. inspect and ensure that kitchen is neat and clean and free from insects and rodents		7	2	5
	PC5. check that all food items are properly secured and stored in a hygienic manner		3	1	2
	PC6. check that necessary fire prevention systems and emergency controls and precautions are taken		7	2	5
	PC7. check if additional customized services can be provided to enhance experience		3	1	2

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	PC8. develop restaurant and sitting areas with ambient lighting, music, facilities, etc.		3	1	2
	PC9. plan for housekeeping requirement and check on facilities available in the vessel		3	1	2
	PC10. create tie-ups for repair and maintenance of various facilities like public seating, gym, entertainment room, games, etc.		7	2	5
	PC11. check the records of housekeeping and cleaning services for complaints and daily performance		7	2	5
	PC12. collect feedback from passengers on their experience		7	2	5
	PC13. instruct and train the crew for thorough check of documents and baggage prior to boarding		7	2	5
	PC14. maintain vigil during stops at jetties, boarding and dis-embarking points with respect to passengers onboarding and going off the vessel		7	2	5
	PC15. maintain vigil with regards to hazardous and dangerous operations ongoing in nearby vessels and take precautions accordingly		3	1	2
	PC16. check for lifeguards and fall protection along the vessel		7	2	5
	PC17. check that adequate number of life jackets and raft boats are present always		7	2	5
	PC18. check that passenger vehicles and cargo are securely stowed and discharged from the vessel		5	2	3
			<b>100</b>	<b>30</b>	<b>70</b>

Options					
Option 1 - Ship and yard planning					
Total marks 100				Marks allocation	
Assessment outcome	Assessment criteria	Total marks	Out of	Theory	Skills Practical
<b>LSC/N3511 Perform ship and yard</b>	PC1. obtain information regarding the vessel details - docking schedule and berth, bays and containers to be	<b>100</b>	7	2	5



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<b>planning</b>	unloaded and loaded				
	PC2. obtain information regarding movement of containers / cargo from port terminals to CFS/ ICD or client		7	2	5
	PC3. check yard's capacity utilization and open bays and locations		7	2	5
	PC4. assess the quantity of cargo to be moved and plan storage space for cargo		7	2	5
	PC5. allocate resources for cargo movement		3	1	2
	PC6. communicate the task at hand to cargo equipment handlers, manual cargo handlers and lifting and vessel supervisors		3	1	2
	PC7. discuss the plan for cargo movement with the operators to finalise the container/ cargo movement plan		7	2	5
	PC8. review that all equipment and workforce is ready for operations at the time of vessel docking / transport arrival		3	1	2
	PC9. review that the necessary precautions and PPEs have been taken		7	2	5
	PC10. deploy resources for loading/ unloading as per cargo stowage plan		3	1	2
	PC11. coordinate with cargo surveyor for safe and secured loading/ unloading		7	2	5
	PC12. conduct periodic inspections of the yard		7	2	5
	PC13. check for cleanliness, adequate use of PPEs, regulations and norms for workforce are clearly followed		7	2	5
	PC14. check that cargo bays are clearly marked and segregated, containers and cargo are stored as per prescribed norms		7	2	5
	PC15. check that equipment are parked are right positions		7	2	5
	PC16. check that all necessary precautions for storage of hazardous cargo is in place including emergency services		7	2	5
	PC17. prepare inspection report highlighting any anomaly or changes, as required		4	2	2
			<b>100</b>	<b>30</b>	<b>70</b>

**Annexure: Trainer qualification and equipment requirement****Trainer qualification –**

- Diploma/ Class XII with minimum 10 years of experience in inland or coastal vessel operations with minimum 3 years of experience as master
- Is and subject matter expert (SME) in of vessel deck operations including navigation, planning and managing operations, deck maintenance, cargo management, housekeeping, compliance to regulatory norms, etc.
- Has good knowledge of vessel engine room operations including equipment operation, troubleshooting, maintenance, repair and overhauling etc.
- The trainer should have the ability to read write and communicate in vernacular language, Hindi and English

**Training Equipment requirement –**

MIS, navigation aids, SOP, Vessel, Vessel and engine room equipment, checklist, , first aid kit, firefighting equipment, life jacket, safety jacket, raft, NCV, navigation charts and aids, simulator, worksheets, stationery, computer, projector etc. Tug vessel and its equipment, navigation aids, simulator Passenger vessel, MIS, budgeting and planning documents, supervision checklists, various SOPs, RFID scanner, bar code scanner, markers, PPEs, ERP, computer, display board, printer, MHEs, etc