

QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR LOGISTICS SECTOR



Contents

1. Introduction and Contacts..... P1
2. Qualifications Pack..... P2
3. Glossary of Key Terms P3
4. OS Units..... P5
5. Nomenclature for QP & OS..... P43
6. Assessment Criteria for each NOS.... P45

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: Cold Chain Process Management Specialist

SECTOR: LOGISTICS

SUB-SECTOR: Cold Chain Logistics

OCCUPATION: Projects

REFERENCE ID: LSC/Q8601

ALIGNED TO: NCO-2015/ NIL

Brief Job Description: The individual at work performs market and product demand-supply assessment for cold storage, prepares project execution and cost plan, designs plant layout, manages project execution of cold storage, select vendors and maintains relationship that is strategic to business and commissions the cold storage.

Personal Attributes: The job requires the individual to have: attention to details, ability to sit and stand at one place for a long time, physical fitness to tolerate temperature difference in and outside cold storage, sun heat, and noise.

Qualifications Pack For Cold Chain Process Management Specialist

Job Details

Qualifications Pack Code	LSC/Q8601		
Job Role	Cold Chain Process Management Specialist		
Credits(NSQF)	TBD	Version number	1.0
Sector	Logistics	Drafted on	08/08/16
Sub-sector	Cold chain logistics	Last reviewed on	04/05/19
Occupation	Projects	Next review date	04/05/22
NSQC Clearance on	NA		

Job Role	Cold Chain Process Management Specialist 'Also Known as Head-Project Management Solutions, Commissioning/Modernization Specialist'
Role Description	The Cold Chain Process Management specialist is responsible for planning, designing, installing, operating and maintaining cold storage facility
NSQF Minimum Educational Qualifications Maximum Educational Qualifications	5 Graduate in engineering/ food technology/ pharmacy (or) Diploma in engineering/ food technology/ pharmacy with relevant experience
Prerequisite License or Training	Not applicable for license. Should be proficient and cleared Level 4
Minimum Job Entry Age	21 years
Experience	Diploma with 2 years of experience in cold storage operations
Applicable National Occupational Standards (NOS)	Compulsory: 1. LSC/N8601 Assess production and plan for setting-up cold storage plant 2. LSC/8602 Design cold storage layout and prepare project costing 3. LSC/N8603 Execute and implement cold storage project 4. LSC/N8604 Manage vendor and maintain relationship 5. LSC/N8605 Test and commission cold storage plant 6. LSC/N9901 Maintain food and personnel safety, health and hygiene in cold storage plant 7. LSC/N9902 Communicate effectively with colleagues and clients
Performance Criteria	As described in the relevant OS units

Qualifications Pack For Cold Chain Process Management Specialist

Definitions

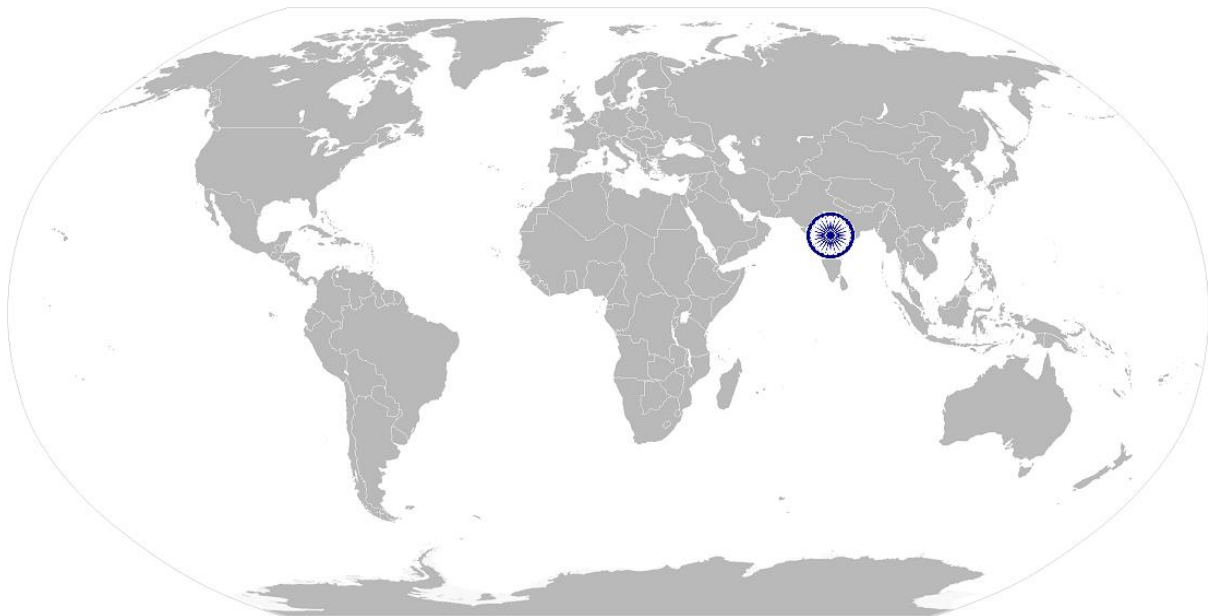
Keywords /Terms	Description
Core Skills/Generic Skills	Core Skills or Generic Skills are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the NOS, these include communication related skills that are applicable 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.
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.

Qualifications Pack For Cold Chain Process Management Specialist

Acronyms

Keywords /Terms	Description
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
OS	Occupational Standards
OH&S	Occupational Health and Safety
PPE	Personal Protective Equipment
HR	Human Resources

National Occupational Standard



Overview

This unit is about understanding and analysing client requirements, assessing market demand, defining project timeline and preparing for project execution and management.

LSC/N8601 Assess production and plan for setting-up cold storage plant

National Occupational Standard	Unit Code	LSC /N8601
	Unit Title (Task)	Assess production and plan for setting-up cold storage plant
	Description	This OS unit is about understanding and analysing client requirements, assessing market demand, defining project timeline and preparing for project execution and management
	Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Gather client requirements • Assess production demand • Prepare for project execution and management <p>Range: Refrigeration unit, Evaporating unit, Condenser, Compressor, programmable logic controller equipment, packaging lines, dock levelers, advanced graders, stacking system, MS Office Software</p>
Performance Criteria(PC) w.r.t. the Scope		
	Element	Performance Criteria
	Gathering client requirements	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. seek appointment and schedule meeting with client</p> <p>PC2. understand and gather client requirements on type of products (Horticulture, Dairy, Poultry, Marine, Processed food), facility (manual, semi-automated and automated) and services (warehouse and transport)</p> <p>PC3. analyse client requirements and document requirements which are clear, unambiguous and feasible for the project as per company's standards</p> <p>PC4. share the project's requirement document with the client</p> <p>PC5. make necessary changes in the project's requirement document as suggested by client</p> <p>PC6. take sign-off from client</p>
	Assessing production demand	<p>To be competent, the user/ individual must be able to: -</p> <p>PC7. visit site and assess proximity of cold storage location from market and agricultural fields</p> <p>PC8. check power availability, potable water availability and road access at the location</p> <p>PC9. determine sample size for accurate results</p> <p>PC10. use quantitative and qualitative research techniques to collect data on products, seasonality of products, product demand etc</p> <p>PC11. perform secondary research on products, seasonality of products, product demand etc</p> <p>PC12. analyse information gathered from primary and secondary research</p> <p>PC13. assess demand-supply of products</p> <p>PC14. select products on various factors like profitability, market demand, cost of production and transport etc</p> <p>PC15. assess capacity of cold storage to meet present and future demand</p>

LSC/N8601

Assess production and plan for setting-up cold storage plant

	PC16. prepare and share market research and assessment report with client
Preparing for project execution and management	To be competent, the user/ individual must be able to: PC17. define project milestones and timelines for project activities: design, project costing, implementation, testing and maintenance, and consulting fees PC18. prepare communication plan, project execution plan and quality management plan PC19. assess risk and prepare plan for risk management PC20. take sign-off from client to start the project
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to know and understand: - KA1. vision, mission and values of the company KA2. business and performance of the company KA3. organisation structure of the company to have better understanding of various departments and skills set present in the company KA4. knowledge repository and various projects done by the company KA5. reporting structure to support and expedite project activities KA6. company's policy and work instructions on quality standards KA7. company's policy on procurement and vendor management KA8. company's personnel management and incentives rules KA9. importance of the individual's role in the workflow KA10. occupational health and safety standards KA11. company's policy on business ethics and code of conduct
B. Technical Knowledge	The individual on the job needs to know and understand: - KB1. materials, equipments and machinery required for cold storage construction KB2. components of modernization: programmable logic controller equipment, packaging lines, dock levelers, advanced graders, alternate technologies, stacking system, modernization of insulation and refrigeration etc KB3. project management terminologies: Work breakdown structure(WBS), Network diagram, slack, lag etc KB4. project management methodology KB5. types of market research techniques: quantitative and qualitative KB6. secondary data collection methods KB7. data analysis techniques: factor, discriminant, cluster etc KB8. types of forecasting techniques KB9. tools for project management and documentation: MS Project, MS excel, MS visio, MS PowerPoint, MS Word KB10. cold chain operation KB11. business engineering design KB12. arithmetic and geometry KB13. basics of statistics: sample size, confidence interval, confidence level, standard of deviation
Skills (S)	
A. Core Skills/	Reading Skills
	The user/individual on the job needs to know and understand how to: SA1. read company's work instructions, customer requirement and quality policy

LSC/N8601

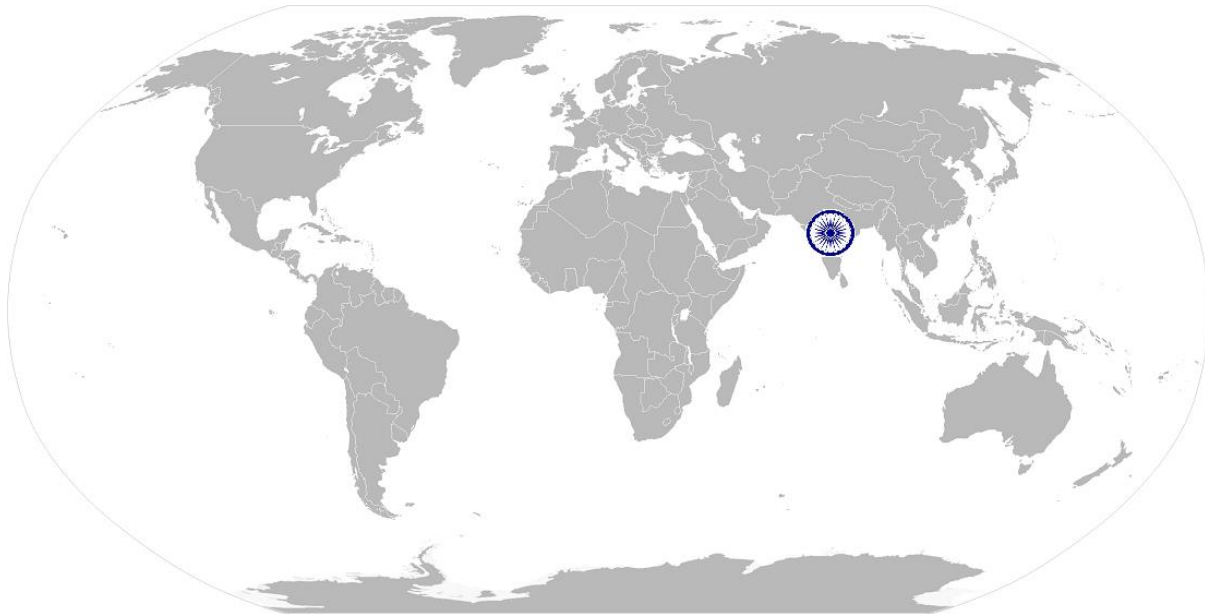
Assess production and plan for setting-up cold storage plant

Generic Skills	SA2. read detailed project and market research reports SA3. search and read information online for market research
	Writing Skills
	The user/individual on the job needs to know and understand how to: SA4. maintain the record of job completed as per company's policy SA5. prepare project related documents SA6. write business emails
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA7. communicate with seniors to report on any issues or delay in approvals SA8. interact with other departments and team members to work efficiently
B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how to: SB1. decide cold storage capacity SB2. decide market research approach and methodology SB3. decide project duration and milestones to achieve SB4. decide project team SB5. decide what documents to be shared with the client required for the implementation and commissioning of the project
	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB6. schedule and plan for meeting the target SB7. plan and organise activities for market research and project management documentation
	Customer Centricity
	The user/individual on the job needs to know and understand how to: SB8. ensure completion of work as per schedule and budget SB9. answer queries from client promptly SB10. schedule meeting and maintain proper communication plan to keep the client aware of progress
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB11. keep contingent plan ready incase of any deviation from plan
	Analytical
	The user/individual on the job needs to know and understand how to: SB12. estimate project timelines and schedule SB13. assess inputs gathered from primary and secondary research SB14. asses market demand
Critical	
	The user/individual on the job needs to know and understand how to: SB15. meet target to gather inputs from people equal to or more than sample number in a given project timeframe

LSC/N8601

Assess production and plan for setting-up cold storage plant

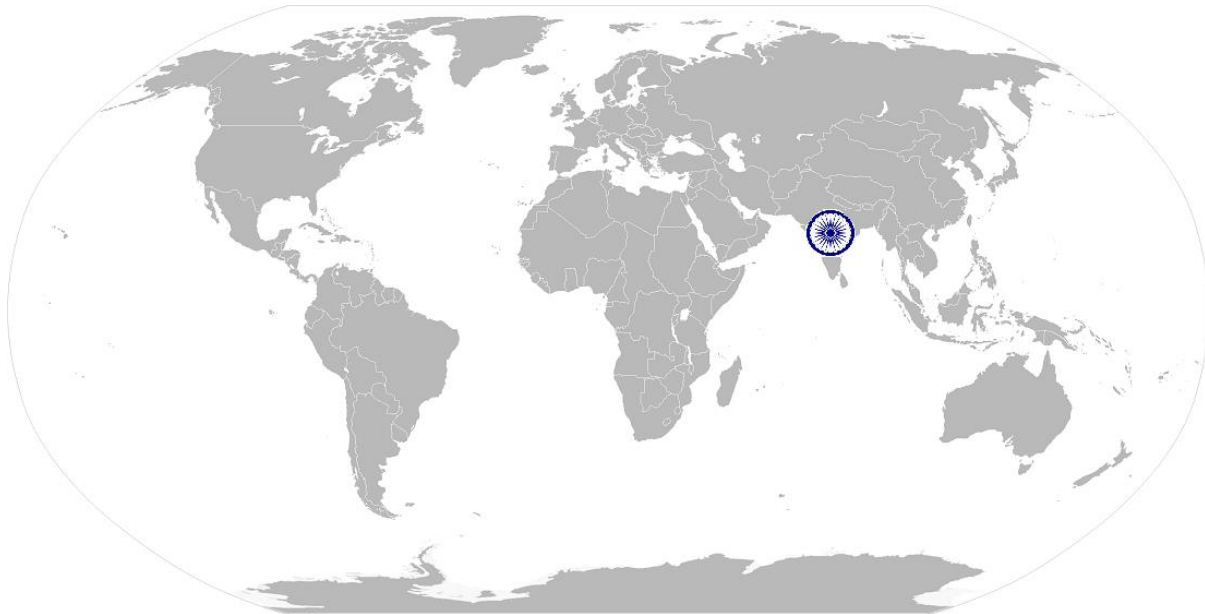
	SB16. convince people to participate in primary research exercise so that market research can be completed as per the schedule
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LSC/N8601 Assess production and plan for setting-up cold storage plant

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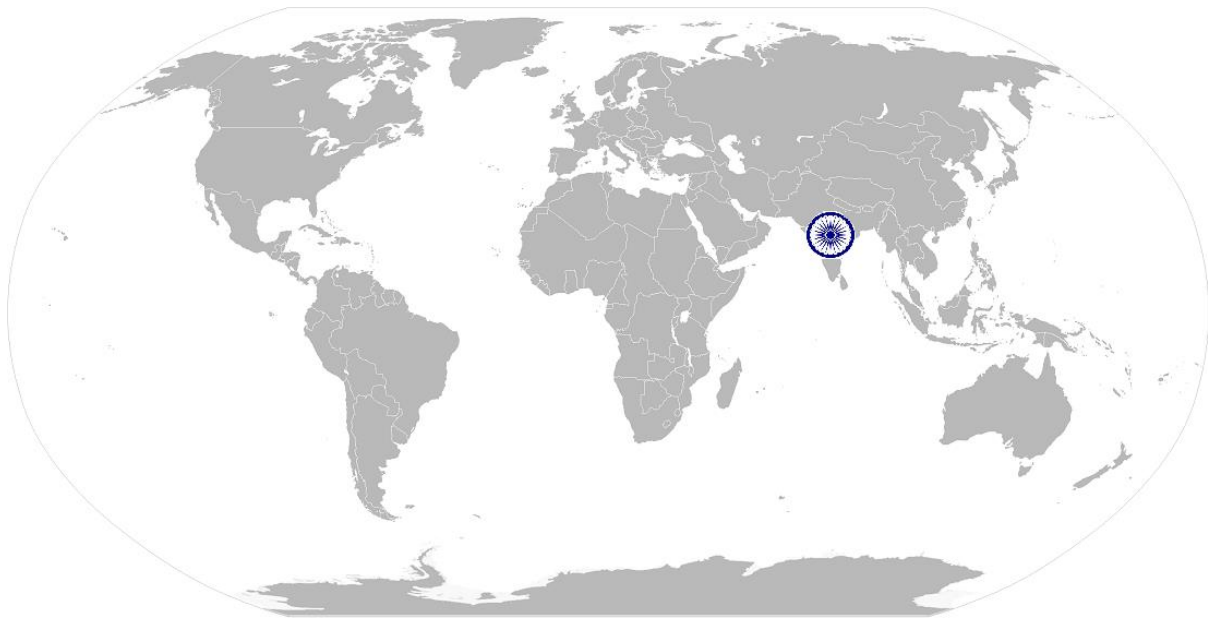
NOS Code	LSC/N8601		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	08/08/16
Industry Sub-sector	Cold chain logistics	Last reviewed on	04/03/19
Occupation	Projects	Next review date	04/03/22



LSC/N8602

Design cold storage plant layout and prepare project costing

National Occupational Standard



Overview

This unit is about visiting and assessing site to design layout of the plant, sharing plan and drawings of cold storage plant as per client's requirements and calculating cost of the project.

LSC/N8602

Design cold storage plant layout and prepare project costing

National Occupational Standard

Unit Code	LSC /N8602
Unit Title (Task)	Design cold storage plant layout and prepare project costing
Description	This OS unit is about visiting and assessing site to design layout of the plant, sharing plan and drawings of cold storage plant as per client's requirements and calculating cost of the project
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Design plant layout • Calculate project cost <p>Range: Refrigeration unit, Evaporating unit, Condenser, Compressor, programmable logic controller equipment, packaging lines, dock levelers, advanced graders, stacking system, MS Office Software, CAD, 3D Max SketchUp, STAAD pro and CRO pro</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Designing plant layout	<p>To be competent, the user/ individual must be able to: -</p> <p>PC1. visit site and assess proposed site surroundings for designing purpose</p> <p>PC2. assess space available for refrigeration, equipment, machinery, elevator, stairs, offices, circulation and facility for loading and unloading materials</p> <p>PC3. analyse functional flow and goods movement (cold rooms, warehouse, loading and unloading facility, washing, grading, ripening chamber, packhouse as per client's requirement)</p> <p>PC4. design corridor or circulation space and fit facilities around it</p> <p>PC5. prepare plan depending on the cold storage operations, offices, parking area etc.</p> <p>PC6. share concept plan, floor plan, 3D, structural and working drawing with the client</p> <p>PC7. calculate product load of the products stored in the cold storage</p> <p>PC8. perform heat-load calculations for measurements of walls, floors, ceilings, equipments etc</p> <p>PC9. calculate size of the compressor</p> <p>PC10. determine number of storeys and room sizes depending on type of product, temperature and humidity requirement, storage capacity, manpower and fork lift movement etc</p> <p>PC11. calculate area and thickness of insulation</p> <p>PC12. Determine cold storage refrigerant depending on size of chambers, location, targeted power saving, refrigerated technology selected etc.</p> <p>PC13. take sign-off from client</p>
Calculating project cost	<p>To be competent, the user/ individual must be able to:</p> <p>PC14. determine land, machinery and miscellaneous assets (furniture and fixtures) cost</p> <p>PC15. determine and list down all required part assemblies, their parts, quantity and unit of measure</p>

LSC/N8602 Design cold storage plant layout and prepare project costing

	<p>PC16. add up cost of all the parts in each assembly and calculate total</p> <p>PC17. determine labour required for the construction and labour cost</p> <p>PC18. calculate administrative, survey, analysis and other preliminary expenses</p> <p>PC19. calculate testing, commissioning and maintenance cost</p> <p>PC20. calculate project cost by adding up all expenses and cost incurred</p>
Knowledge and Understanding (K)	
<p>A. Organizational Context (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. business and performance of the company</p> <p>KA3. organisation structure of the company to have better understanding of various departments and skills set present in the company</p> <p>KA4. standard costing and budgeting processes</p> <p>KA5. knowledge repository and various projects done by the company</p> <p>KA6. reporting structure to support and expedite project activities</p> <p>KA7. company's policy and work instructions on quality standards</p> <p>KA8. company's policy on procurement and vendor management</p> <p>KA9. company's personnel management and incentives rules</p> <p>KA10. importance of the individual's role in the workflow</p> <p>KA11. occupational health and safety standards</p> <p>KA12. company's policy on business ethics and code of conduct</p>
<p>B. Technical Knowledge</p>	<p>The individual on the job needs to know and understand: -</p> <p>KB1. designing tools: CAD, 3D Max SketchUp, STAAD pro and CRO pro</p> <p>KB2. design scales</p> <p>KB3. how to draw concept plan, working drawing, floor plan, final plan and 3D drawing</p> <p>KB4. heat-load calculation formula</p> <p>KB5. product load calculation formula</p> <p>KB6. formula for calculating area and thickness of insulation</p> <p>KB7. compressor size calculation formula</p> <p>KB8. architectural norms and standards</p> <p>KB9. bills of materials (BOM)</p> <p>KB10. cooling technology: Diffuser, Gravity cooling and overhead pump feed type</p> <p>KB11. materials, equipments and machinery required for cold storage construction</p> <p>KB12. components of modernization: programmable logic controller equipment, packaging lines, dock levelers, advanced graders, alternate technologies, stacking system, modernization of insulation and refrigeration, cold storage refrigerant etc</p> <p>KB13. tools for documentation: MS excel and MS Word</p> <p>KB14. cold chain operation</p> <p>KB15. business engineering design</p> <p>KB16. arithmetic and geometry</p>
Skills (S)	
<p>A. Core Skills/</p>	<p>Reading Skills</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA1. read company's work instructions, customer requirement and quality policy</p>

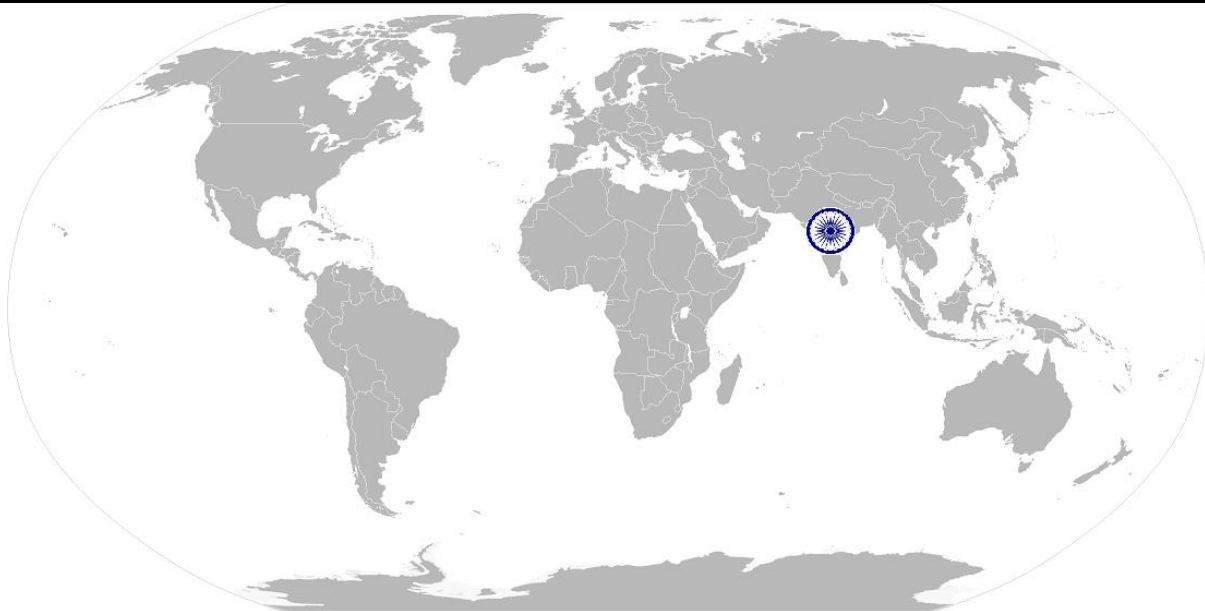
LSC/N8602 Design cold storage plant layout and prepare project costing

Generic Skills	SA2. read concept, working and final design plan, 3D and structural drawing SA3. read instructions while using software tools SA4. read project report
	Writing Skills
	The user/individual on the job needs to know and understand how to: SA5. maintain the record of job completed as per company's policy SA6. prepare concept, working and final design plan, 3D and structural drawing SA7. write business emails
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA8. communicate with seniors to report on any issues or delay in approvals SA9. interact with other departments and team members to work efficiently
B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how to: SB1. decide parts, materials, machinery required for constructing cold storage plant SB2. decide scale for presenting design plans
	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB3. schedule and plan for meeting the target SB4. procure required software applications and get them installed before the commencement of designing activity
	Customer Centricity
	The user/individual on the job needs to know and understand how to: SB5. ensure completion of work as per schedule and budget SB6. answer queries from client promptly SB7. schedule meetings and maintain proper communication plan to keep the client aware of progress
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB8. troubleshoot basic software problems SB9. keep contingent plan ready incase of any deviation from plan
	Analytical
	The user/individual on the job needs to know and understand how to: SB10. estimate project cost without errors
	Critical
	The user/individual on the job needs to know and understand how to: SB11. optimise processes and reduce wastage of goods during movement from one facility to the other SB12. complete designing activity on time without compromising on creativity

NOS Version Control

LSC/N8602 Design cold storage plant layout and prepare project costing

NOS Code	LSC/N8602		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	08/08/16
Industry Sub-sector	Cold chain logistics	Last reviewed on	04/03/19
Occupation	Projects	Next review date	04/03/22



National Occupational Standard



Overview

This unit is about assigning tasks to team members, issuing materials for construction to concerned person or department, monitoring project related activities, tracking and documenting progress.

LSC/N8603

Execute and implement cold storage project

National Occupational Standard

Unit Code	LSC /N8603
Unit Title (Task)	Execute and implement cold storage project
Description	This OS unit is about assigning tasks to team members, issuing materials for construction to concerned person or department, monitoring project related activities, tracking and documenting progress
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Manage material and human resources • Track and monitor activities • Report and document activities <p>Range: Refrigeration unit, Evaporating unit, Condenser, Compressor, programmable logic controller equipment, packaging lines, dock levelers, advanced graders, stacking system, Enterprise resource planning software (ERP), MS Office Software, CAD, 3D Max SketchUp, STAAD pro and CRO pro</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Managing material and human resource	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. refer detailed project report project execution plan and prepare detailed project construction plan</p> <p>PC2. break down project execution activities to everyday tasks</p> <p>PC3. take print out of tasks to be performed everyday</p> <p>PC4. assign tasks to team members</p> <p>PC5. take construction requirements from stakeholders</p> <p>PC6. issue materials as per requirement and availability</p> <p>PC7. handle grievances of team members and labourers</p>
Tracking and monitoring of activities	<p>To be competent, the user/ individual must be able to:</p> <p>PC8. conduct status meetings</p> <p>PC9. record minutes of meeting and follow up</p> <p>PC10. keep a track on expenses incurred and manhours utilized</p> <p>PC11. keep a track on how much quantity of raw materials etc are ordered and utilized</p> <p>PC12. take a round of the premises and inspect the site</p> <p>PC13. ensure issued materials, equipments, machinery etc are used for construction</p> <p>PC14. track and monitor activities to ensure tasks' completion on time</p> <p>PC15. escalate any non-completion of task or comprise on quality to concerned authority</p>
Reporting and documenting activities	<p>To be competent, the user/ individual must be able to:</p> <p>PC16. share detailed project report consisting of details on project team, project execution, quality management, risk management, stakeholder and communication management with the client as per company's standards</p> <p>PC17. document expenses incurred and manhours utilized</p> <p>PC18. report to client and seniors about the progress of the project</p>

LSC/N8603

Execute and implement cold storage project

Knowledge and Understanding (K)	
<p>A. Organizational Context (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. business and performance of the company</p> <p>KA3. organisation structure of the company to have better understanding of various departments and skills set present in 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. company's policy and work instructions on quality standards</p> <p>KA7. company's policy on procurement and vendor management</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. occupational health and safety standards</p> <p>KA11. company's policy on business ethics and code of conduct</p> <p>KA12. fire Policy from any insurance company as per Company's Policy</p>
<p>B. Technical Knowledge</p>	<p>The individual on the job needs to know and understand: -</p> <p>KB1. tools for project management and documentation: MS Project, MS excel, MS visio, MS PowerPoint, MS Word</p> <p>KB1. project management process and related terminologies</p> <p>KB2. insurance for plant and machinery during erection and commissioning</p> <p>KB3. application of principles of refrigeration</p> <p>KB4. materials, equipments and machinery requirements for cold storage construction activities</p> <p>KB5. components of modernization: programmable logic controller equipment, packaging lines, dock levelers, advanced graders, alternate technologies, stacking system, modernization of insulation and refrigeration etc</p> <p>KB6. interpreting concept plan, working drawing, floor plan, final plan and 3D drawing</p> <p>KB7. cold storage operation</p> <p>KB8. business engineering design</p> <p>KB9. bills of materials (BOM)</p>
Skills (S)	
<p>A. Core Skills/ Generic Skills</p>	<p>Reading Skills</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA1. read company's work instructions, customer requirement and quality policy</p> <p>SA2. read concept, working and final design plan, 3D and structural drawing</p> <p>SA3. read project report and other project related documents</p>
	<p>Writing Skills</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA4. maintain the record of job completed as per company's policy</p> <p>SA5. document day-to-day progress in project and daily expenses incurred</p> <p>SA6. write business emails</p> <p>SA7. write minutes of meeting</p> <p>SA8. write down observations related to project execution on the site</p>

LSC/N8603

Execute and implement cold storage project

	<p>Oral Communication (Listening and Speaking skills)</p>
	<p>The user/individual on the job needs to know and understand how to: SA9. communicate with seniors to report on any issues or delay in approvals SA10. interact with other departments and team members to work efficiently</p>
<p>B. Professional Skills</p>	<p>Decision Making</p>
	<p>The user/individual on the job needs to know and understand how to: SB1. decide and assign responsibilities to team members SB2. select the required amount of materials, equipments and machinery for construction</p>
	<p>Plan and Organize</p>
	<p>The user/individual on the job needs to know and understand how to: SB3. schedule and plan for meeting the target SB4. decide order of completion of tasks SB5. arrange required materials, workforce and machinery as per quantity mentioned and keep them ready before commencement of any construction activity</p>
	<p>Customer Centricity</p>
	<p>The user/individual on the job needs to know and understand how to: SB6. ensure completion of work as per schedule and budget SB7. answer queries from client promptly SB8. schedule meeting and maintain proper communication plan to keep the client aware of progress</p>
	<p>Problem Solving</p>
	<p>The user/individual on the job needs to know and understand how to: SB9. solve issues related to workforce, material, machine, etc. SB10. keep contingent plan ready in case of any deviation from plan</p>
	<p>Analytical</p>
	<p>The user/individual on the job needs to know and understand how to: SB11. estimate requirement of materials, parts, equipment, machinery etc SB12. optimise operations to reduce turn-around time and cost SB13. assess risk and take appropriate action</p>
<p>Critical</p>	
<p>The user/individual on the job needs to know and understand how to: SB14. make sure team members and construction workers follow safety instructions to avoid any accident at construction site</p>	

LSC/N8603

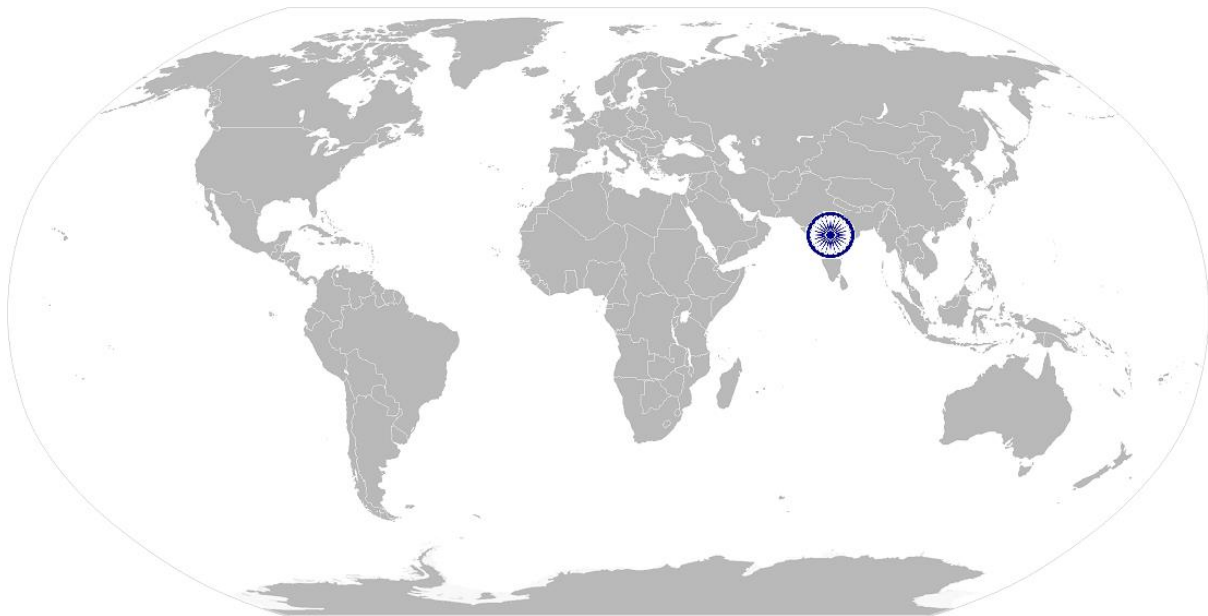
Execute and implement cold storage project

NOS Version Control

NOS Code	LSC/N8603		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	08/08/16
Industry Sub-sector	Cold chain logistics	Last reviewed on	04/03/19
Occupation	Projects	Next review date	04/03/22



National Occupational Standard



Overview

This unit is about selecting and working with vendors meeting project requirements, negotiating contracts, evaluating performance and maintaining relationship with vendors.

LSC/N8604

Manage vendor and maintain relationship

National Occupational Standard

Unit Code	LSC /N8604
Unit Title (Task)	Manage vendor and maintain relationship
Description	This OS unit is about selecting and working with vendors meeting project requirements, negotiating contracts, evaluating performance and maintaining relationship with vendors
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Assess and select new vendors Work with vendors Evaluate performance of vendors Establish relationship with vendors <p>Range: Refrigeration unit, Evaporating unit, Condenser, Compressor, programmable logic controller equipment, packaging lines, dock levelers, advanced graders, stacking system, Enterprise resource planning software (ERP), MS Office Software</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Assessing and selecting new vendors	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. search for possible vendors meeting project requirements</p> <p>PC2. use appropriate tendering processes to receive proposals from vendors</p> <p>PC3. assess and evaluate proposals submitted by vendors</p> <p>PC4. call vendors for presentation or query session</p> <p>PC5. select the most suitable vendor as per company's evaluation criteria</p> <p>PC6. negotiate and manage contract, Statement of work(SOW), service level agreement(SLA) etc with the vendor</p>
Working with vendors	<p>To be competent, the user/ individual must be able to:</p> <p>PC7. prepare a list of materials, equipments, machinery etc</p> <p>PC8. send purchase order to vendors as per company's standards (email or courier)</p> <p>PC9. receive invoice from vendors against the purchase order</p> <p>PC10. receive and inspect the shipment</p> <p>PC11. release payments to vendors as per the bills raised and contract signed</p>
Evaluating performance of vendors	<p>To be competent, the user/ individual must be able to:</p> <p>PC12. record and evaluate performance of vendors on factors like quality of service, on-time order completion, quality of material, client satisfaction, call answer time</p> <p>PC13. perform analysis on recorded information and take corrective measures to improve performance of vendors</p>
Establishing relationship with vendors	<p>To be competent, the user/ individual must be able to:</p> <p>PC14. inform and give purchase orders to respective vendors in advance, so that necessary materials, machinery etc are available at the commencement of construction activity</p> <p>PC15. release payments to vendors on time</p> <p>PC16. conduct review meetings</p>

LSC/N8604

Manage vendor and maintain relationship

PC17. understand and resolve vendor concerns and issues	
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to know and understand: KA1. vision, mission and values of the company KA2. business and performance of the company KA3. organisation structure of the company to have better understanding of various departments and skills set present in the company KA4. knowledge repository and various projects done by the company KA5. reporting structure to support and expedite project activities KA6. company's policy and work instructions on quality standards KA7. company's policy on procurement and vendor management KA8. company's personnel management and incentives rules KA9. importance of the individual's role in the workflow KA10. occupational health and safety standards KA11. company's policy on business ethics and code of conduct
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. vendor management process KB2. factors for evaluation of performance of vendors KB3. procurement related terminologies: Purchase order (PO), Invoice etc KB4. about contract management, SLA and SOW KB5. using enterprise resource planning software (ERP) KB6. procurement process KB7. tools for documentation: MS excel and MS Word KB8. materials, equipments and machinery required for cold storage construction KB9. components of modernization: programmable logic controller equipment, packaging lines, dock levelers, advanced graders, alternate technologies, stacking system, modernization of insulation and refrigeration etc KB10. value chain of cold chain segment KB11. bills of materials (BOM)
Skills (S)	
A. Core Skills/ Generic Skills	<p>Reading Skills</p> <p>The user/individual on the job needs to know and understand how to:</p> SA1. read company's work instructions, customer requirement and quality policy SA2. read project report SA3. read contracts, SLA and SOW SA4. read PO and Invoice SA5. read and understand vendors' performance analysis report
	<p>Writing Skills</p> <p>The user/individual on the job needs to know and understand how to:</p> SA6. maintain the record of job completed as per company's policy SA7. record information about vendors on factors like quality of service, on-time order completion, quality of material, client satisfaction, call answer time etc SA8. write PO and Invoice SA9. write understand vendors' performance analysis report SA10. write business emails

LSC/N8604
Manage vendor and maintain relationship

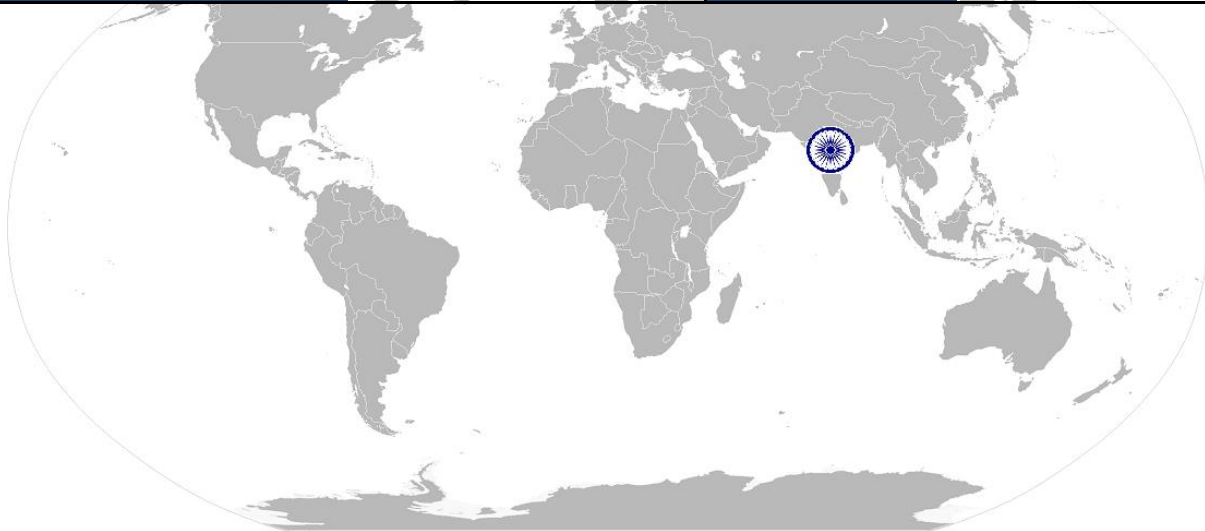
B. Professional Skills	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA11. communicate with seniors to report on any issues or delay in approvals SA12. interact with other department, team members and vendors to work efficiently SA13. carefully listen vendor concerns and issues
	Decision Making
	The user/individual on the job needs to know and understand how to: SB1. select vendors meeting project requirements SB2. inspect shipment and decide on accepting or rejecting order SB3. decide on corrective measures to improve performance of vendors
	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB4. schedule and plan for meeting the target SB5. arrange for materials, workforce and machinery requirement in advance SB6. plan and organise review meetings with vendors
	Customer Centricity
	The user/individual on the job needs to know and understand how to: SB7. ensure completion of work as per schedule and budget SB8. answer queries from client promptly SB9. schedule meeting and maintain proper communication plan to keep the client aware of progress
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB10. resolve issues related to vendors ,materials, machinery, etc. SB11. keep contingent plan ready incase of any deviation from plan
	Analytical
	The user/individual on the job needs to know and understand how to: SB12. select and evaluate vendors on project relevant factors SB13. evaluate vendors on performance criteria relevant to project and business
	Critical
	The user/individual on the job needs to know and understand how to: SB14. develop and maintain good and strategic relationship with vendors

LSC/N8604

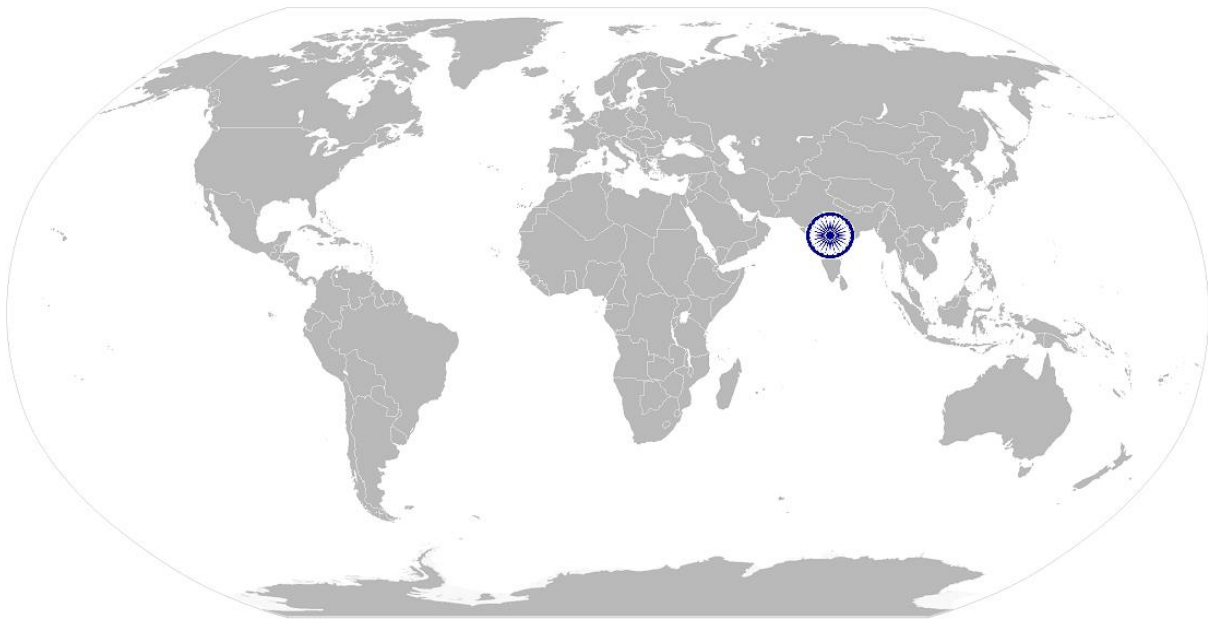
Manage vendor and maintain relationship

NOS Version Control

NOS Code	LSC/N8604		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	08/08/16
Industry Sub-sector	Cold chain logistics	Last reviewed on	04/03/19
Occupation	Projects	Next review date	04/03/22



National Occupational Standard



Overview

This unit is about creating testing scenarios to test equipments, machinery and operations of cold storage, escalating issues and following up with the concerned person to resolve open issues and commissioning of cold storage plant

LSC/N8605

Test and commission cold storage plant

Unit Code	LSC /N8605
Unit Title (Task)	Test and commission cold storage plant
Description	This OS unit is about creating testing scenerios to test equipments, machinery and operations of cold storage-, escalating issues and following up with the concerned person to resolve open issues and commissioning of cold storage plant
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Test cold storage plant • Commission cold storage plant <p>Range: Refrigeration unit, Evaporating unit, Condenser, Compressor, programmable logic controller equipment, packaging lines, dock levelers, advanced graders, stacking system, MS Office Software, Cold storage testing equipments like electronic leak detector, multimeter etc</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Testing cold storage plant	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. check internal and external joints, panels and vapour seals</p> <p>PC2. ensure no voids and gaps in the insulation</p> <p>PC3. ensure proper fitting of doors and door heaters</p> <p>PC4. confirm thermal conductivity of the insulation material fall within the range specified by the supplier or ISO/FDIS 4898</p> <p>PC5. test refrigeration sytem is functioning as per company's standards</p> <p>PC6. make certain that cold rooms are operating and maintaining defined temperature</p> <p>PC7. make certain proper functionality of control panel</p> <p>PC8. make sure proper ventillation in cold rooms and ripening chambers</p> <p>PC9. make sure proper installation of generator/s and electricity supply is in the plant</p> <p>PC10. ensure seamless flow of materials from one facility to the other</p> <p>PC11. check rack system is in place and able to take products as well as labour load</p> <p>PC12. check fire and emergency alarm</p> <p>PC13. escalate issues or defects to stakeholders</p> <p>PC14. follow up and resolve issues</p>
Commissioning of cold storage plant	<p>To be competent, the user/ individual must be able to -</p> <p>PC15. prepare schedule for commissioning activities</p> <p>PC16. assign responsibilities to team members</p> <p>PC17. create test scenarios for each stage of the process</p> <p>PC18. determine success and failure of any test scenario</p> <p>PC19. escalate failure of test scenario to stakeholders, resolve and re-test</p> <p>PC20. conduct drill successfully</p> <p>PC21. ensure safety mechanisms are in place</p> <p>PC22. perform client training and demonstrations</p>

LSC/N8605

Test and commission cold storage plant

	<p>PC23. obtain statutory approvals and insurance approvals</p> <p>PC24. ensure maintenance of refrigeration system, machinery, equipments etc as per contract</p>
Knowledge and Understanding (K)	
<p>A. Organizational Context (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. business and performance of the company</p> <p>KA3. organisation structure of the company to have better understanding of various departments and skills set present in 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. company's policy and work instructions on quality standards</p> <p>KA7. company's policy on procurement and vendor management</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. occupational health and safety standards</p> <p>KA11. company's policy on business ethics and code of conduct</p> <p>KA12. technical standards for design and construction of cold storages: Bureau of Indian standards(BIS), International standard(ISO) etc</p>
<p>B. Technical Knowledge</p>	<p>The individual on the job needs to know and understand:</p> <p>KB1. categories of cold storages to determine technical standards</p> <p>KB2. types of testing: component testing, performance testing etc</p> <p>KB3. about statutory approvals and insurance approvals required for the operation of cold storage</p> <p>KB4. process and procedure to be followed to obtain statutory approvals and insurance approvals required for the operation of cold storage</p> <p>KB5. how to conduct fire drill</p> <p>KB6. equipments required for testing</p> <p>KB7. components of modernization: programmable logic controller equipment, packaging lines, dock levelers, advanced graders, alternate technologies, stacking system, modernization of insulation and refrigeration etc</p> <p>KB8. tools for project management and documentation: MS Project, MS excel, MS visio, MS PowerPoint, MS Word</p> <p>KB9. project management terminology: Work breakdown structure(WBS), Network diagram, slack, lag etc</p> <p>KB10. project management methodology</p> <p>KB11. principles of refrigeration</p> <p>KB12. cold chain operation</p> <p>KB13. business engineering design</p>
Skills (S)	
<p>A. Core Skills/ Generic Skills</p>	<p>Reading Skills</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA1. read company's work instructions, customer requirement and quality policy</p> <p>SA2. read project report</p> <p>SA3. read test scenarios</p>

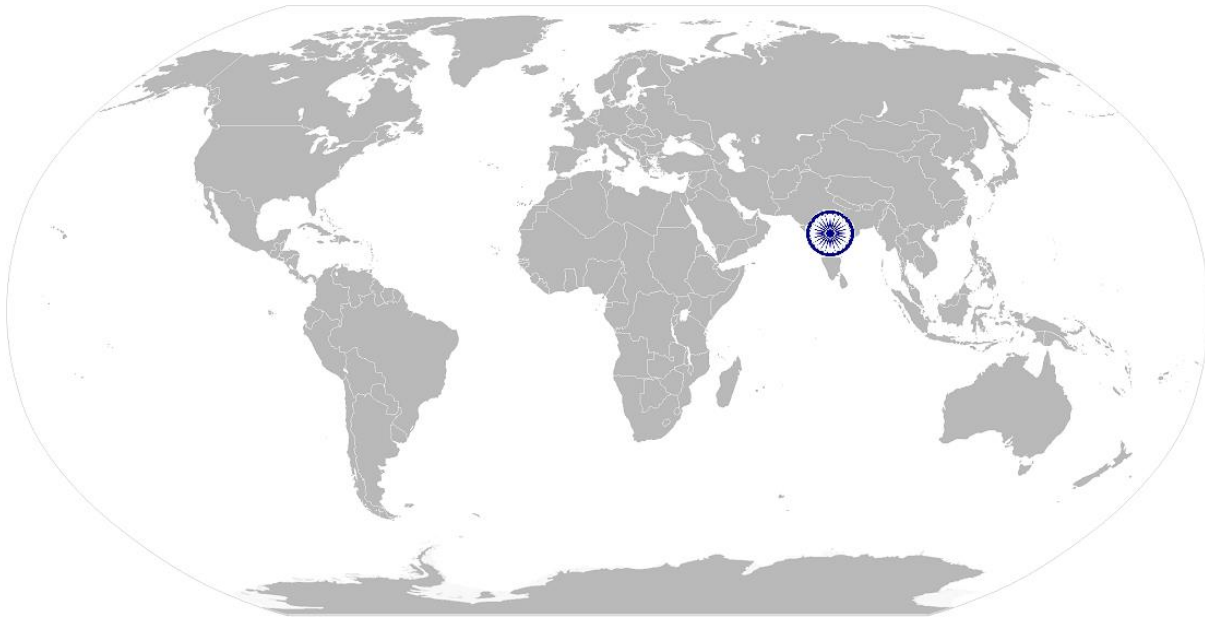
LSC/N8605
Test and commission cold storage plant

	Writing Skills
	The user/individual on the job needs to know and understand how to: SA4. maintain the record of job completed as per company's policy SA5. prepare test scenarios and document results
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA6. communicate with seniors to report on any issues or delay in approvals SA7. interact with other department, team members and vendors to work efficiently
B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how to: SB1. determine success and failure of test scenario SB2. decide on commissioning activities and the commissioning team SB3. decide plant is functioning as per company's standards and is ready to handover
	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB4. schedule and plan for meeting the target SB5. plan and organise testing and commissioning activities in an appropriate order
	Customer Centricity
	The user/individual on the job needs to know and understand how to: SB6. ensure completion of work as per schedule and budget SB7. answer queries from client promptly SB8. schedule meeting and maintain proper communication plan to keep the client aware of progress
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB9. keep contingent plan ready incase of any deviation from plan SB10. follow up and resolve open issues
	Analytical
	The user/individual on the job needs to know and understand how to: SB11. differentiate defects based on high, medium and low priority SB12. optimise operations to reduce turn-around time and cost
	Critical
	The user/individual on the job needs to know and understand how to: SB13. resolve issues or defects without disturbing other functions

NOS Version Control

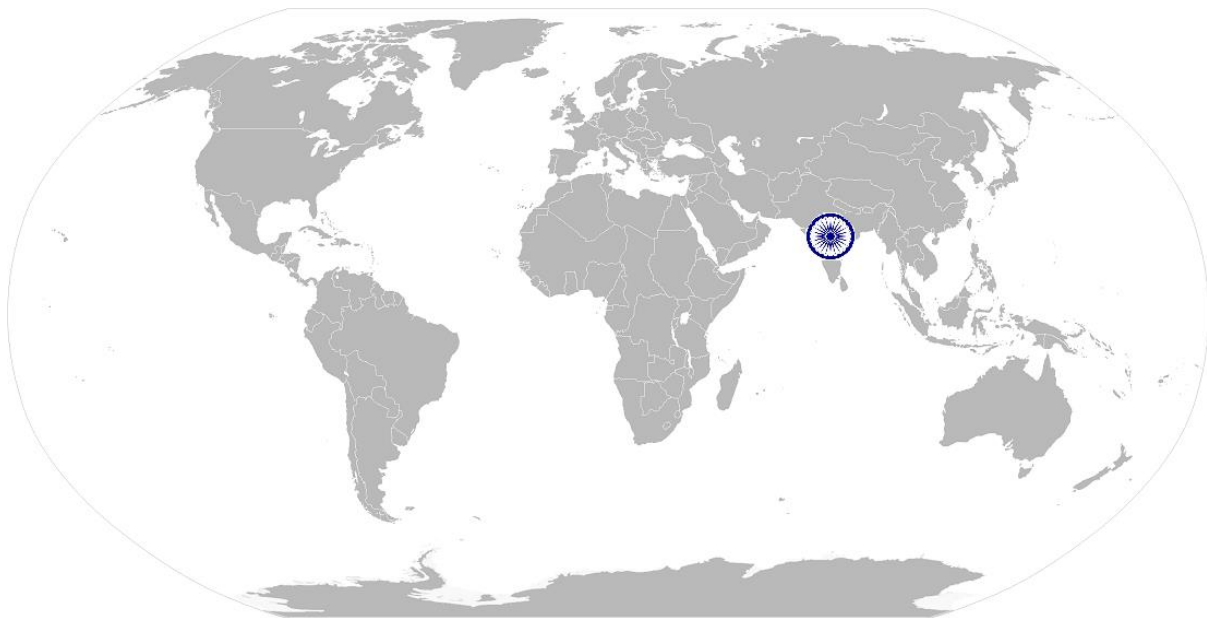
LSC/N8605
Test and commission cold storage plant

NOS Code	LSC/N8605		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	08/08/16
Industry Sub-sector	Cold chain logistics	Last reviewed on	04/03/19
Occupation	Projects	Next review date	04/03/22



LSC/N9901 Maintain food and personnel safety, health and hygiene in cold storage plant

National Occupational Standard



Overview


This unit is about complying with safety, health and hygiene at the workplace to have a hazard-free environment and avoid downtime.

LSC/N9901 Maintain food and personnel safety, health and hygiene in cold storage plant

National Occupational Standard

Unit Code	LSC/N9901
Unit Title (Task)	Maintain food and personnel safety, health and hygiene in cold storage plant
Description	This OS unit is about complying with safety, health and hygiene at the workplace to have a hazard-free environment and avoid downtime
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Take precautionary measures to avoid work hazards • Follow standard health, safety and hygiene procedures
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Taking precautionary measures to avoid work hazards	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. assess the various health, safety and environmental hazards in the cold storage</p> <p>PC2. take necessary steps to eliminate or minimize the hazards</p> <p>PC3. analyze the causes of accidents at the workplace</p> <p>PC4. take preventive measures to avoid risk of cold burns and other injury due to contact with hot surfaces, gas, fire, hot fluids/ liquids, etc.</p> <p>PC5. ensure the employees have access to first aid kit when needed</p> <p>PC6. ensure to use personal protective equipment and safety gear such as gloves, jacket, footwear etc. for loading and unloading material in cold rooms to protect themselves from hypothermia, frostbite etc</p> <p>PC7. ensure to display safety signs at places where necessary for people to be cautious</p> <p>PC8. use rubber mats in the places where floors are constantly wet</p> <p>PC9. ensure electrical precautions such as insulated clothing, adequate equipment insulation, dry work area, switch off the power supply when not required, etc</p> <p>PC10. display emergency exit plan at prominent places and have emergency assembly area earmarked as a grid for easy counting of on duty associates and workers.</p> <p>PC11. unplug the control panel, compressor, condensor etc before performing maintenance</p> <p>PC12. report to the superior on any problems and hazards identified</p> <p>PC13. install fire alarms (electrical/manual) in cold store/deep freeze and keep other safety devices like hammer/mallet in the storage area</p>
Following standard health, safety and hygiene procedures	<p>To be competent, the user/individual must be able to:</p> <p>PC14. maintain appropriate ventilation in the cold rooms to avoid unacceptable accumulation of heat, condensation or odours</p> <p>PC15. check and review the cold storage areas frequently</p> <p>PC16. stack items in an organized way and use safe lifting techniques to reduce risk of injuries from handling procedures at the storage areas</p> <p>PC17. ensure no sign of pest infestation and install rodent traps, fly glues and insectocutors wherever needed</p> <p>PC18. follow hygiene & sanitation standards of Government bodies like FSSAI, APEDA and /or EIA or importing countries like FAO, EU standards after PC 20</p>

LSC/N9901 Maintain food and personnel safety, health and hygiene in cold storage plant

	<p>PC19. use effective loading and unloading systems</p> <p>PC20. proper stock rotation (First in First out) to be practised</p> <p>PC21. segregate damaged/ non-conforming products from other products to designate area for appropriate disposition</p> <p>PC22. fumigate containers depending upon product and contamination or as per customers' requirement</p> <p>PC23. avoid smoking, spitting, eating etc near food storage area</p> <p>PC24. ensure reefers are covered, clean, free from pest infestation & other contaminants</p> <p>PC25. dispose cold storage plant waste in the designated areas safely as per company's policies and rules</p> <p>PC26. ensure to be safe while handling machines(generator, compressor, condensor etc), gas (ammonia) and chemicals(ethylene, refrigerants etc)</p> <p>PC27. keep the floors free from oil, water and grease to avoid slippery surface</p> <p>PC28. cut nails regularly and avoid applying nail paint. Avoid wearing bangles, rings, and chains in cold storage</p> <p>PC29. wash hands with soap solution and dry under a dryer as they enter for duty or after using wash room</p> <p>PC30. periodic examination of protective devices, pressure vessels and pipelines, and parts of pipework by a competent person to prevent defect that may give rise to danger</p> <p>PC31. ensure workers suffering from abscess, boils etc should be relieved from food handling</p> <p>PC32. develop personal hygiene habits like brushing teeth, taking shower everybody, wearing clean and tidy clothes after ironing etc </p>
Knowledge and Understanding (K)	
<p>A. Organizational Context (Knowledge of the company / organization and its processes)</p>	<p>The individual on the job needs to know and understand:</p> <p>KA1. company's HR policies on personnel management</p> <p>KA2. company's reporting structure</p> <p>KA3. occupational health and safety standards</p> <p>KA4. cold storageplant inspection checklist</p> <p>KA5. company's sanitary standard operating procedures</p> <p>KA6. procedures to follow during emergency maintenance issues</p> <p>KA7. technical standards for design and construction of cold storages: Bureau of Indian standards(BIS), International standard(ISO) etc</p>
<p>B. Technical Knowledge</p>	<p>The individual on the job needs to know and understand:</p> <p>KB1. the purpose and usage of protective gears such as gloves , jackets etc. while working</p> <p>KB2. use of first aid at workplace</p> <p>KB3. cold storage order 1980</p> <p>KB4. food safety and standards act 2006</p> <p>KB5. reporting procedure or heirarchy for signs of damage and potential hazards</p>

LSC/N9901 Maintain food and personnel safety, health and hygiene in cold storage plant

	<p>KB6. methods to minimize accidental risks</p> <p>KB7. safe storage and handling of chemicals like refrigerants, ammonia, ethylene etc</p> <p>KB8. loading and unloading systems</p> <p>KB9. standard operating procedure for safety drills and equipment maintenance</p> <p>KB10. operation of machines: compressor, condenser, evaporator etc</p> <p>KB11. emergency procedures to be followed in case of a mishap such as fire, accidents, etc. and communication of safety instructions to subordinate staff</p> <p>KB12. emergency responses in case of malfunctioning of refrigeration equipment as a whole or its components like evaporator, condenser or compressor</p> <p>KB13. solid, liquid and gaseous waste disposal, treatment norms and equipment</p> <p>KB14. necessary action to be taken for the hazards identified</p> <p>KB15. knowledge of Quality systems like BRC, FSSAI, ISO, FSSC, HACCP etc</p>
Skills (S)	
<p>A. Core Skills/ Generic Skills</p>	<p>Reading Skills</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA1. read and interpret the relevant organisation policies, procedures and diagrams that identify health, safety and safe environmental practices.</p> <p>SA2. read job sheets, company policy documents and information displayed at the workplace for health, safety and environment.</p> <p>SA3. read notes/comments from the senior</p> <p>Writing Skills</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA4. fill up documentation related to health, safety and environmental standards, if required</p> <p>Oral Communication (Listening and Speaking skills)</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. verbally report health, safety and environmental hazards and poor organisation practice.</p> <p>SA6. communicate to the supervisor about the work health, safety and environmental issues</p> <p>SA7. receive instructions from supervisor on minimizing the risks</p> <p>SA8. communicate with co-workers about the precautions to be taken for hazards free work</p>
<p>B. Professional Skills</p>	<p>Decision Making</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. take preventive measures for the identified hazards</p> <p>SB2. select appropriate hand tools and personal protection equipment</p> <p>SB3. identify first aid needs in case of an injury</p> <p>Plan and Organize</p> <p>The user/individual on the job needs to know and understand how to:</p>

LSC/N9901 Maintain food and personnel safety, health and hygiene in cold storage plant

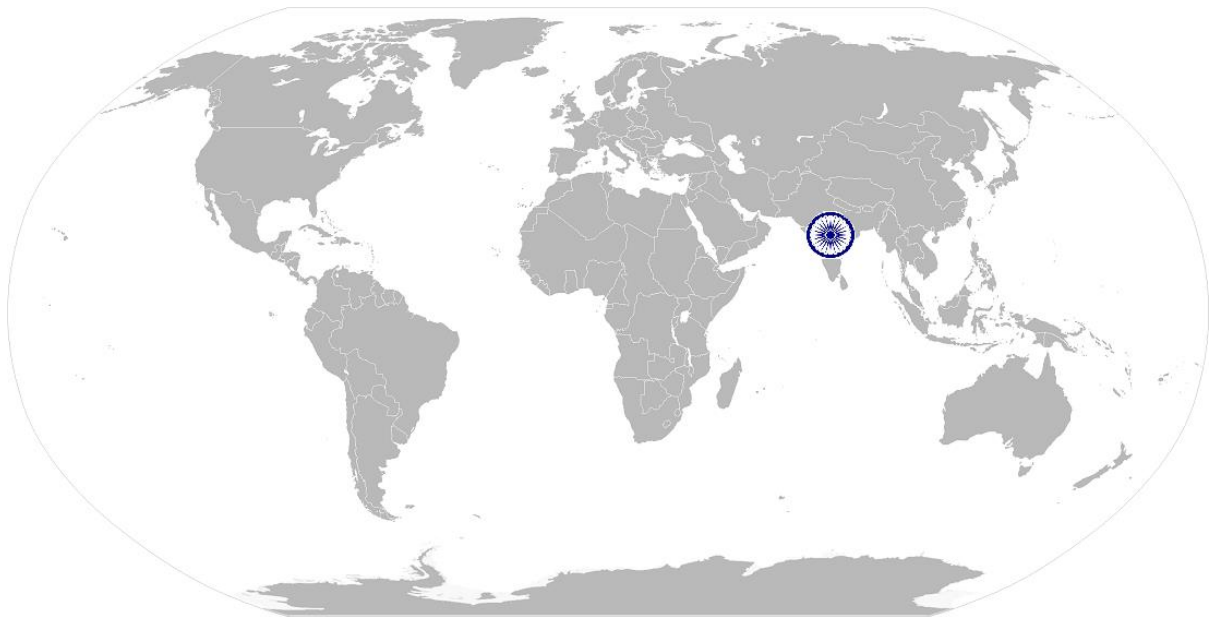
	SB4. formalize and display evacuation plan at strategic locations
	Customer Centricity
	The user/ individual on the job needs to know and understand how to: SB5. ensure targeted product delivery by practicing stipulated standards of occupational health safety and environmental measures
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB6. take care of personal and equipment protection SB7. identify the hazards and suggest possible solutions
	Analytical
	The user/individual on the job needs to know and understand how to: SB8. use safety equipment such as fire extinguisher during fire accidents SB9. store tools in a safe way SB10. analyse the seriousness of the hazards
	Critical
	The user/individual on the job needs to know and understand how to: SB11. evolve smooth workflow by avoiding hazards at workplace SB12. evaluate and apply the possible solutions for the hazards, as necessary



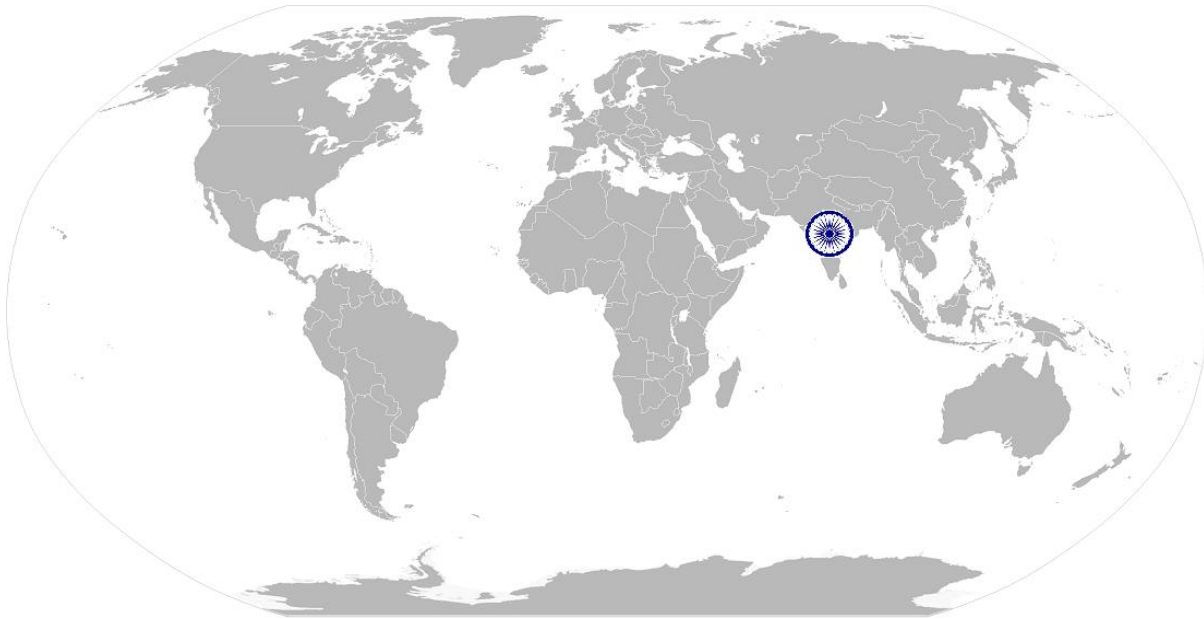
LSC/N9901 Maintain food and personnel safety, health and hygiene in cold storage plant

NOS Version Control

NOS Code	LSC/N9901		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	08/08/16
Industry Sub-sector	Cold chain logistics	Last reviewed on	04/03/19
Occupation	Projects	Next review date	04/03/22



National Occupational Standard



Overview

This unit is about coordinating and communicating effectively with seniors, colleagues and clients to achieve a smooth workflow.

LSC/N9902

Communicate effectively with colleagues and clients

National Occupational Standard

Unit Code	LSC/N9902
Unit Title (Task)	Communicate effectively with colleagues and clients
Description	This OS unit is about coordinating and communicating effectively with seniors, colleagues and clients to achieve a smooth workflow
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Interact with seniors • Communicate with colleagues • Communicate effectively with clients
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Interacting with seniors	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. understand the work output requirements, targets, performance indicators and incentives</p> <p>PC2. deliver quality work on time and report any anticipated reasons for delays</p> <p>PC3. escalate unresolved problems or complaints to the relevant superior</p> <p>PC4. communicate project progress proactively to the superior</p> <p>PC5. receive feedback on work standards</p> <p>PC6. document the completed work schedule and handover to the superior</p>
Communicating with colleagues	<p>To be competent, the user/ individual must be able to:</p> <p>PC7. exhibit trust, support and respect to all the colleagues in the workplace</p> <p>PC8. aim to achieve hassle free cold chain operation</p> <p>PC9. help and assist colleagues with information and knowledge</p> <p>PC10. seek assistance from the colleagues when required</p> <p>PC11. identify the potential and existing conflicts with the colleagues and resolve</p> <p>PC12. pass on essential information to other colleagues on timely basis</p> <p>PC13. maintain the etiquette, use polite language, demonstrate responsible and disciplined behaviors to the colleagues</p> <p>PC14. interact with colleagues from different departments: ripening chamber, cold storage, transport, packhouse etc to effectively carry out the work among the team and understand the nature of their work</p> <p>PC15. put team over individual goals and multi task or share work where necessary supporting the colleagues</p> <p>PC16. highlight any errors of colleagues, help to rectify and ensure quality output</p> <p>PC17. work with cooperation, coordination, communication and collaboration, with shared goals and supporting each others performance</p>
Communicating effectively with clients	<p>To be competent, the user/ individual must be able to:</p> <p>PC18. ask relevant questions to the client and identify their needs</p> <p>PC19. possess strong knowledge on market and cold chain operation</p> <p>PC20. brief the client clearly on potential costs and challenges involved in the cold chain industry</p> <p>PC21. communicate with the client in a polite, professional and friendly manner</p> <p>PC22. build effective but impersonal relationship with the client</p>

LSC/N9902

Communicate effectively with colleagues and clients

	<p>PC23. ensure the appropriate language and tone are used with clients</p> <p>PC24. listen actively and have a two way communication</p> <p>PC25. be sensitive to the gender, cultural and social differences such as modes of greeting, formality, etc.</p> <p>PC26. understand the client expectations correctly and provide the appropriate products and services</p> <p>PC27. understand the client dissatisfaction and address or escalate their complaints effectively</p> <p>PC28. maintain a positive, sensible and cooperative manner all time</p> <p>PC29. ensure to maintain a proper body language, dress code, gestures and etiquettes towards the client</p> <p>PC30. avoid interrupting the client while they talk</p> <p>PC31. ensure to avoid negative questions and statements to the client</p> <p>PC32. inform the client on any issues or problems before hand and also on the developments involving them</p> <p>PC33. ensure to respond back to the client immediately for their voice messages, e-mails, apps, etc.</p> <p>PC34. develop good rapport with the client and promote other products and services</p> <p>PC35. seek feedback from the client on their understanding to what was discussed</p> <p>PC36. explain the terms and conditions clearly</p>
Knowledge and Understanding (K)	
<p>A. Organizational Context (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. business and performance of the company</p> <p>KA3. company's policies on personnel management, effective team work at workplace</p> <p>KA4. company's HR policies</p> <p>KA5. company's reporting structure</p> <p>KA6. company's documentation policy</p> <p>KA7. company's customer profile</p> <p>KA8. occupational health and safety standards</p> <p>KA9. company's policy on business ethics and code of conduct</p>
<p>B. Technical Knowledge</p>	<p>The individual on the job needs to know and understand:</p> <p>KB1. methods for effective communication with various categories of people and the different departments in the organization</p> <p>KB2. significance of team coordination and productivity targets of the organisation</p> <p>KB3. how to record the job activity as required on various types of documents</p> <p>KB4. how to use computer or smartphone to communicate effectively and productively</p> <p>KB5. significance of helping colleagues with specific issues and problems</p> <p>KB6. importance of meeting quality and time standards as a team</p> <p>KB7. how to practice effective listening and talking</p>

LSC/N9902

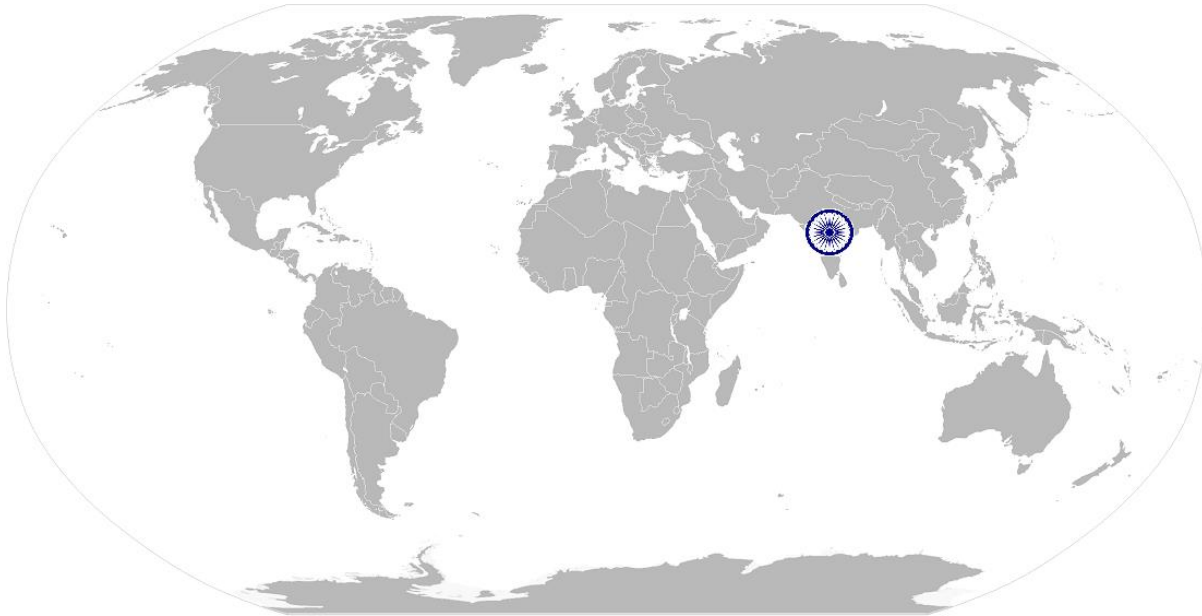
Communicate effectively with colleagues and clients

	<p>KB8. effective use of voice tone and pitch for communication</p> <p>KB9. how to demonstrate ethics and convey discipline to the clients</p> <p>KB10. how to build effective working relationship with mutual trust and respect within the team</p> <p>KB11. importance of dealing with grievances effectively and in time</p>
Skills (S)	
<p>A. Core Skills/ Generic Skills</p>	<p>Reading Skills</p>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. read job sheets, company policy documents and information displayed at the workplace</p> <p>SA2. read notes/comments from the senior</p>
	<p>Writing Skills</p>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA3. fill up documentation pertaining to job requirement</p>
	<p>Oral Communication (Listening and Speaking skills)</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA4. interact with team members to work efficiently</p> <p>SA5. communicate effectively with senior to achieve smooth workflow</p> <p>SA6. communicate effectively with the clients to build a good rapport with them</p> <p>SA7. use language that the client or colleague understands</p> <p>SA8. use the communication systems of the company, e.g., telephone, fax, public announcement systems</p> <p>SA9. E-mail and use Internet for communicating</p> <p>SA10. use of audio-visual aids to communicate complex issues</p>
<p>B. Professional Skills</p>	<p>Decision Making</p>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SB1. spot and communicate potential areas of disruptions to work process and report the same</p> <p>SB2. report to supervisor and deal with a colleague individually, depending on the type of concern</p>
	<p>Plan and Organize</p>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SB3. plan communication strategy in order to avoid conflicts and work disruption</p>
	<p>Customer Centricity</p>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SB4. practice patient listening, careful talking and paraphrasing in order to avoid misunderstanding</p>
<p>Problem Solving</p>	
<p>The user/ individual on the job needs to know and understand how to:</p> <p>SB5. coordinate with different departments and multi-task as necessary</p> <p>SB6. contribute to quality of team work and achieve smooth workflow</p>	

LSC/N9902

Communicate effectively with colleagues and clients

	SB7. share work load as required
	SB8. delegate work in consultation with senior or as necessary instead of allowing work to pile up
	Analytical
	The user/ individual on the job needs to know and understand how to: SB9. resolve recurring inter-personal conflicts by clear and two-way dialogue
	Critical
	The user/ individual on the job needs to know and understand how to: SB10. improve work processes by interacting with others and adopting best practices

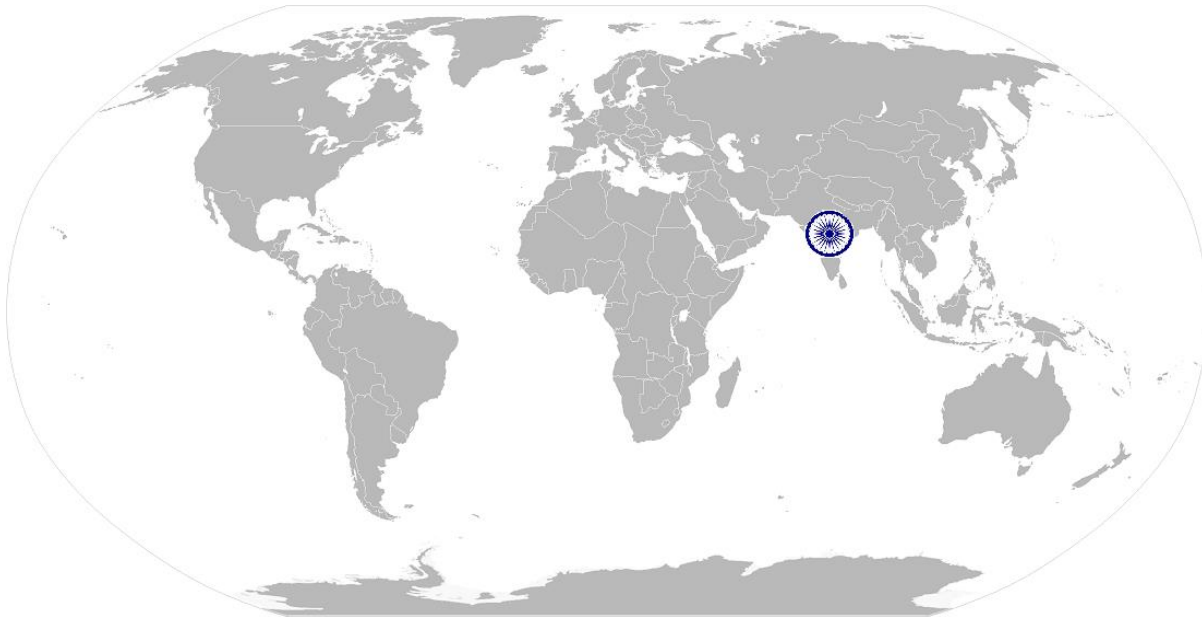


LSC/N9902

Communicate effectively with colleagues and clients

NOS Version Control

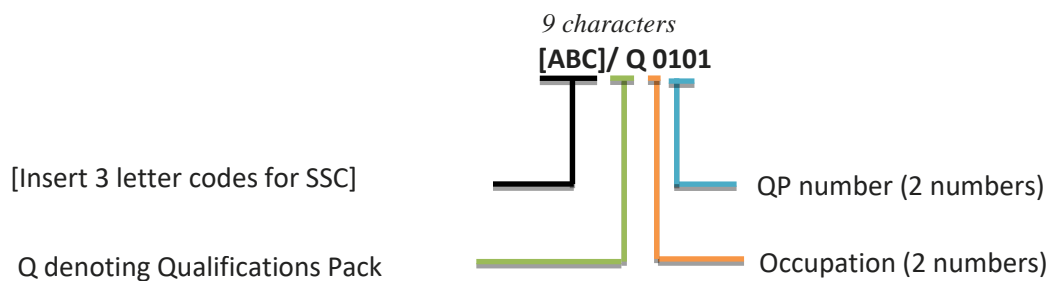
NOS Code	LSC/N9902		
Credits(NSQF)	TBD	Version number	1.0
Industry	Logistics	Drafted on	08/08/16
Industry Sub-sector	Cold chain logistics	Last reviewed on	04/03/19
Occupation	Projects	Next review date	04/03/22



Annexure

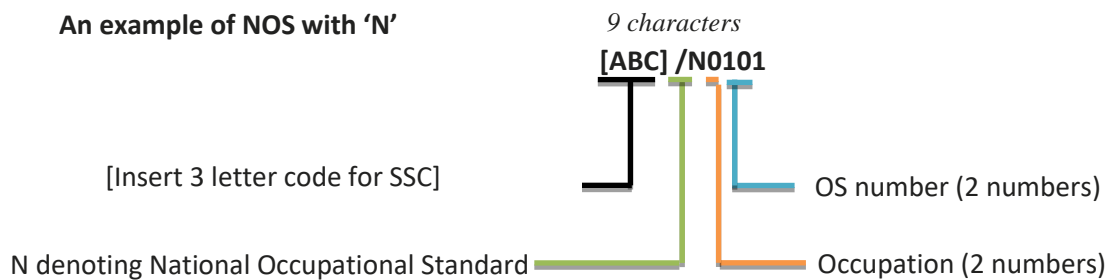
Nomenclature for QP and NOS

Qualifications Pack



Occupational Standard

An example of NOS with 'N'



Qualifications Pack For Cold Chain Process Management Specialist

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

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role Commissioning/Modernization specialist

Qualification Pack LSC/Q8601

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 criteria
5. To pass the Qualification Pack, every trainee should score a minimum of 70% in every NOS
6. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack

Compulsory NOS					
Total Marks 700			Marks Allocation		
Assessment Outcome	Assessment Criteria for Outcomes	Total Marks	out of	Theory	Practical
LSC/8601 Assess production and plan for setting-up cold storage plant	PC1. seek appointment and schedule meeting with client	100	5	1	4
	PC2. understand and gather client requirements on type of products (Horticulture, Dairy, Poultry, Marine, Processed food), facility (manual, semi-automated and automated) and services (warehouse and transport)		5	1	4
	PC3. analyse client requirements and document requirements which are clear, unambiguous and feasible for the project as per company's standards		5	1	4
	PC4. share the project's requirement document with the client		5	1	4
	PC5. make necessary changes in the project's requirement document as suggested by client		5	1	4
	PC6. take sign-off from client		5	1	4
	PC7. visit site and assess proximity of cold storage location from market		5	1	4

Qualifications Pack For Cold Chain Process Management Specialist

	and agricultural fields				
	PC8. check power availability, potable water availability and road access at the location		5	1	4
	PC9. determine sample size for accurate results		5	1	4
	PC10. use quantitative and qualitative research techniques to collect data on products, seasonality of products, product demand etc		5	1	4
	PC11. perform secondary research on products, seasonality of products, product demand etc		5	1	4
	PC12. analyse information gathered from primary and secondary research		5	1	4
	PC13. assess demand-supply of products		5	1	4
	PC14. select products on various factors like profitability, market demand, cost of production and transport etc		5	1	4
	PC15. assess capacity of cold storage to meet present and future demand		5	1	4
	PC16. prepare and share market research and assessment report with client		5	1	4
	PC17. define project milestones and timelines for project activities: design, project costing, implementation, testing and maintenance, and consulting fees		5	1	4
	PC18. prepare communication plan, project execution plan and quality management plan		5	1	4
	PC19. assess risk and prepare plan for risk management		5	1	4
	PC20. take sign-off from client to start the project		5	1	4
			100	20	80
LSC/N8602 Design cold storage plant layout and prepare project costing	PC1. visit site and assess proposed site surroundings for designing purpose	100	5	1	4
	PC2. assess space available for refrigeration, equipment, machinery, elevator, stairs, offices, circulation and facility for loading and unloading materials		5	1	4
	PC3. analyse functional flow and goods movement (cold rooms, warehouse, loading and unloading facility, washing, grading, ripening chamber, packhouse as per client's		5	1	4

Qualifications Pack For Cold Chain Process Management Specialist

	requirement)				
	PC4. design corridor or circulation space and fit facilities around it		5	1	4
	PC5. prepare plan depending on the cold storage operations, offices, parking area etc.		5	1	4
	PC6. share concept plan, floor plan, 3D ,structural and working drawing with the client		5	1	4
	PC7. calculate product load of the products stored in the cold storage		5	1	4
	PC8. perform heat-load calculations for measurements of walls, floors, ceillings, equipments etc		5	1	4
	PC9. calculate size of the compressor		5	1	4
	PC10. determine number of storeys and room sizes depending on type of product, temperature and humidity requirement, storage capacity, manpower and fork lift movement etc		5	1	4
	PC11. calculate area and thickness of insulation		5	1	4
	PC12. Determine cold storage refrigerant depending on size of chambers, location, targeted power saving, refrigerated technology selected etc.		5	1	4
	PC13. take sign-off from client Calculating project cost		5	1	4
	PC14. determine land, machinery and miscellaneous assets (furniture and fixtures) cost		5	1	4
	PC15. determine and list down all required part assemblies, their parts, quantity and		5	1	4
	PC16. add up cost of all the parts in each assembly and calculate total		5	1	4
	PC17. determine labour required for the construction and labour cost		5	1	4
	PC18. calculate administrative, survey, analysis and other preliminary expenses		5	1	4
	PC19. calculate testing, commissioning and maintenance cost		5	1	4
	PC20. calculate project cost by adding up all expenses and cost incurred		5	1	4
			100	20	80
LSC/N8603 Execute and implement cold storage project	PC1. refer detailed project report project execution plan and prepare detailed project construction plan	100	6	2	4
	PC2. break down project execution		6	2	4

Qualifications Pack For Cold Chain Process Management Specialist

	activities to everyday tasks				
	PC3. take print out of tasks to be performed everyday		6	2	4
	PC4. assign tasks to team members		6	2	4
	PC5. take construction requirements from stakeholders		6	2	4
	PC6. issue materials as per requirement and availability		6	2	4
	PC7. handle grievances of team members and labourers Tracking and monitoring of activities		6	2	4
	PC8. conduct status meetings		6	2	4
	PC9. record minutes of meeting and follow up		6	2	4
	PC10. keep a track on expenses incurred and manhours utilized		6	2	4
	PC11. keep a track on how much quantity of raw materials etc are ordered and utilized		6	2	4
	PC12. take a round of the premises and inspect the site		5	1	4
	PC13. ensure issued materials, equipments, machinery etc are used for construction		5	1	4
	PC14. track and monitor activities to ensure tasks' completion on time		5	1	4
	PC15. escalate any non-completion of task or comprise on quality to concerned authority Reporting and documenting activities		5	1	4
	PC16. share detailed project report consisting of details on project team, project execution, quality management, risk management, stakeholder and communication management with the client as per company's standards		5	1	4
	PC17. document expenses incurred and manhours utilized		6	2	4
	PC18. report to client and seniors about the progress of the project		3	1	2
			100	30	70
LSC/N8604 Manage vendor and maintain relationship	PC1. search for possible vendors meeting project requirements	100	7	2	5
	PC2. use appropriate tendering processes to receive proposals from vendors		7	2	5
	PC3. assess and evaluate proposals submitted by vendors		6	2	4
	PC4. call vendors for presentation or query session		6	2	4

Qualifications Pack For Cold Chain Process Management Specialist

	PC5. select the most suitable vendor as per company's evaluation criteria		6	2	4
	PC6. negotiate and manage contract, Statement of work(SOW), service level agreement(SLA) etc with the vendor Working with vendors		6	2	4
	PC7. prepare a list of materials, equipments,machinery etc		6	2	4
	PC8. send purchase order to vendors as per company's standards (email or courier)		6	2	4
	PC9. receive invoice from vendors against the purchase order		6	2	4
	PC10. receive and inspect the shipment		6	2	4
	PC11. release payments to vendors as per the bills raised and contract signed Evaluating performance of vendors		6	2	4
	PC12. record and evaluate performance of vendors on factors like quality of service, on-time order completion, quality of material, client satisfaction, call answer time		6	2	4
	PC13. perform analysis on recorded information and take corrective measures to improve performance of vendors Establishing relationship with vendors		6	2	4
	PC14. inform and give purchase orders to respective vendors in advance, so that necessary materials, machinery etc are available at the commencement of construction activity		5	1	4
	PC15. release payments to vendors on time		5	1	4
	PC16. conduct review meetings		5	1	4
	PC17. understand and resolve vendor concerns and issues		5	1	4
			100	30	70
LSC/N8605 Test and commission cold storage plant	PC1. check internal and external joints, panels and vapour seals	100	5	2	3
	PC2. ensure no voids and gaps in the insulation		5	2	3
	PC3. ensure proper fitting of doors and door heaters		5	2	3
	PC4. confirm thermal conductivity of the insulation material fall within the range specified by the supplier or ISO/FDIS 4898		5	2	3
	PC5. test refrigeration system is functioning as per company's		5	2	3

Qualifications Pack For Cold Chain Process Management Specialist

	standards				
	PC6. make certain that cold rooms are operating and maintaining defined temperature		5	2	3
	PC7. make certain proper functionality of control panel		4	1	3
	PC8. make sure proper ventilation in cold rooms and ripening chambers		4	1	3
	PC9. make sure proper installation of generator/s and electricity supply is in the plant		4	1	3
	PC10. ensure seamless flow of materials from one facility to the other		4	1	3
	PC11. check rack system is in place and able to take products as well as labour load		4	1	3
	PC12. check fire and emergency alarm		4	1	3
	PC13. escalate issues or defects to stakeholders		4	1	3
	PC14. follow up and resolve issues Commissioning of cold storage plant		4	1	3
	PC15. prepare schedule for commissioning activities		4	1	3
	PC16. assign responsibilities to team members		4	1	3
	PC17. create test scenarios for each stage of the process		4	1	3
	PC18. determine success and failure of any test scenario		4	1	3
	PC19. escalate failure of test scenario to stakeholders, resolve and re-test		4	1	3
	PC20. conduct drill successfully		4	1	3
	PC21. ensure safety mechanisms are in place		4	1	3
	PC22. perform client training and demonstrations		4	1	3
	PC23. obtain statutory approvals and insurance approvals		3	1	2
	PC24. ensure maintenance of refrigeration system, machinery, equipments etc as per contract		3	1	2
			100	30	70
LSC/N9901 Maintain food and personnel safety, health and hygiene in cold storage plant	PC1. assess the various health, safety and environmental hazards in the cold storage	100	4	1	3
	PC2. take necessary steps to eliminate or minimize the hazards		4	1	3
	PC3. analyze the causes of accidents at the workplace		4	1	3
	PC4. take preventive measures to avoid		3	1	2

Qualifications Pack For Cold Chain Process Management Specialist

	risk of cold burns and other injury due to contact with hot surfaces, gas, fire, hot fluids/ liquids, etc.				
PC5.	ensure the employees have access to first aid kit when needed		3	1	2
PC6.	ensure to use personal protective equipment and safety gear such as gloves, jacket, footwear etc. for loading and unloading material in cold rooms to protect themselves from hypothermia, frostbite etc		3	1	2
PC7.	ensure to display safety signs at places where necessary for people to be cautious		3	1	2
PC8.	use rubber mats in the places where floors are constantly wet		2	0	2
PC9.	ensure electrical precautions such as insulated clothing, adequate equipment insulation, dry work area, switch off the power supply when not required, etc		3	1	2
PC10.	display emergency exit plan at prominent places and have emergency assembly area earmarked as a grid for easy counting of on duty associates and workers.		3	1	2
PC11.	unplug the control panel, compressor, condensor etc before performing maintenance		2	0	2
PC12.	report to the superior on any problems and hazards identified		3	1	2
PC13.	install fire alarms (electrical/manual) in cold store/deep freeze and keep other safety devices like hammer/mallet in the storage area		4	1	3
PC14.	maintain appropriate ventilation in the cold rooms to avoid unacceptable accumulation of heat, condensation or odours		3	1	2
PC15.	check and review the cold storage areas frequently		3	1	2
PC16.	stack items in an organized way and use safe lifting techniques to reduce risk of injuries from handling procedures at the storage areas		3	1	2
PC17.	ensure no sign of pest infestation and install rodent traps, fly glues and insectocutors wherever needed		3	1	2

Qualifications Pack For Cold Chain Process Management Specialist

PC18.	follow hygiene & sanitation standards of Government bodies like FSSAI, APEDA and /or EIA or importing countries like FAO, EU standards after PC 20	3	1	2
PC19.	use effective loading and unloading systems	3	1	2
PC20.	proper stock rotation (First in First out) to be practised	3	1	2
PC21.	segregate damaged/ non-conforming products from other products to designate area for appropriate disposition	3	1	2
PC22.	fumigate containers depending upon product and contamination or as per customers' requirement	3	1	2
PC23.	avoid smoking, spitting, eating etc near food storage area	3	1	2
PC24.	ensure reefers are covered, clean, free from pest infestation & other contaminants	3	1	2
PC25.	dispose cold storage plant waste in the designated areas safely as per company's policies and rules	4	1	3
PC26.	ensure to be safe while handling machines(generator, compressor, condensor etc), gas (ammonia) and chemicals(ethylene, refrigerants etc)	3	1	2
PC27.	keep the floors free from oil, water and grease to avoid slippery surface	3	1	2
PC28.	cut nails regularly and avoid applying nail paint. Avoid wearing bangles, rings, and chains in cold storage	3	1	2
PC29.	wash hands with soap solution and dry under a dryer as they enter for duty or after using wash room	3	1	2
PC30.	periodic examination of protective devices, pressure vessels and pipelines, and parts of pipework by a competent person to prevent defect that may give rise to danger	3	1	2
PC31.	ensure workers suffering from abscess, boils etc should be relieved from food handling	4	1	3
PC32.	develop personal hygiene habits like brushing teeth, taking shower everybody, wearing clean and tidy clothes after ironing etc	3	1	2
		100	30	70

Qualifications Pack For Cold Chain Process Management Specialist

LSC/N9902 Communicate effectively with colleagues and clients	PC1. understand the work output requirements, targets, performance indicators and incentives	100	3	1	2
	PC2. deliver quality work on time and report any anticipated reasons for delays		3	1	2
	PC3. escalate unresolved problems or complaints to the relevant superior		3	1	2
	PC4. communicate project progress proactively to the superior		3	1	2
	PC5. receive feedback on work standards		3	1	2
	PC6. document the completed work schedule and handover to the superior		3	1	2
	PC7. exhibit trust, support and respect to all the colleagues in the workplace		3	1	2
	PC8. aim to achieve hassle free cold chain operation		3	1	2
	PC9. help and assist colleagues with information and knowledge		3	1	2
	PC10. seek assistance from the colleagues when required		3	1	2
	PC11. identify the potential and existing conflicts with the colleagues and resolve		3	1	2
	PC12. pass on essential information to other colleagues on timely basis		3	1	2
	PC13. maintain the etiquette, use polite language, demonstrate responsible and disciplined behaviors to the colleagues		3	1	2
	PC14. interact with colleagues from different departments: ripening chamber, cold storage, transport, packhouse etc to effectively carry out the work among the team and understand the nature of their work		3	1	2
	PC15. put team over individual goals and multi task or share work where necessary supporting the colleagues		3	1	2
	PC16. highlight any errors of colleagues, help to rectify and ensure quality output		3	1	2
	PC17. work with cooperation, coordination, communication and collaboration, with shared goals and supporting each other's		3	1	2

Qualifications Pack For Cold Chain Process Management Specialist

	performance				
PC18.	ask relevant questions to the client and identify their needs		3	1	2
PC19.	possess strong knowledge on market and cold chain operation		3	1	2
PC20.	brief the client clearly on potential costs and challenges involved in the cold chain industry		3	1	2
PC21.	communicate with the client in a polite, professional and friendly manner		3	1	2
PC22.	build effective but impersonal relationship with the client		3	1	2
PC23.	ensure the appropriate language and tone are used with clients		3	1	2
PC24.	listen actively and have a two-way communication		3	1	2
PC25.	be sensitive to the gender, cultural and social differences such as modes of greeting, formality, etc.		3	1	2
PC26.	understand the client expectations correctly and provide the appropriate products and services		3	1	2
PC27.	understand the client dissatisfaction and address or escalate their complaints effectively		3	1	2
PC28.	maintain a positive, sensible and cooperative manner all time		3	1	2
PC29.	ensure to maintain a proper body language, dress code, gestures and etiquettes towards the client		2	0	2
PC30.	avoid interrupting the client while they talk		2	0	2
PC31.	ensure to avoid negative questions and statements to the client		2	0	2
PC32.	inform the client on any issues or problems before hand and also on the developments involving them		2	0	2
PC33.	ensure to respond back to the client immediately for their voice messages, e-mails, apps, etc.		2	0	2
PC34.	develop good rapport with the client and promote other products and services		2	0	2
PC35.	seek feedback from the client on their understanding to what was discussed		2	1	1
PC36.	explain the terms and conditions clearly		2	1	1
			100	30	70



Qualifications Pack For Cold Chain Process Management Specialist

