

## Qualification Pack



# Operator - LPG bottling plant

QP Code: HYC/Q 4201

NSQF Level: 4

Hydrocarbon Sector Skill Council  
Second Floor - OIDB Bhawan,  
Tower C, Plot No. 2, Vikas Marg, Sector – 73,  
Noida, Uttar Pradesh - 201301

### Contents

<b>HYC/Q4201 Operator – LPG bottling plant .....</b>	<b>3</b>
Brief Job Description .....	3
Personal Attributes .....	3
<b>Applicable National Occupational Standards (NOS) .....</b>	<b>3</b>
Compulsory NOS: .....	3
Qualification Pack (QP) Parameters.....	3
<b>HYC/N4201 Perform LPG bottling plant operations .....</b>	<b>5</b>
<b>HYC/N9301 Working effectively in a team .....</b>	<b>10</b>
<b>HYC/N9302: Maintain health, safety and security procedures .....</b>	<b>14</b>
<b>Assessment Guidelines and Assessment Weightage .....</b>	<b>19</b>
Assessment Guidelines .....	19
Assessment Weightage .....	20
<b>Acronyms.....</b>	<b>21</b>
<b>Glossary.....</b>	<b>22</b>

## HYC/Q4201 Operator – LPG bottling plant

### Brief Job Description

Individual at this job is responsible for the operations in LPG bottling plant such as receipt of cylinder, filling, storage, dispatch and maintenance of LPG cylinder as per SOP. The person at this job maintains safety and security at bottling plant.

### Personal Attributes

The individual should have good sense of responsibility, a good organizer and time keeper. The person should have the ability to work in a team.

### Applicable National Occupational Standards (NOS)

#### Compulsory NOS:

1. HYC/N4201 LPG bottling plant operations
2. HYC/N9301 Working effectively in a team
3. HYC/N9302 Maintain health, safety and security procedures

### Qualification Pack (QP) Parameters

Sector	Hydrocarbon
Sub-Sector	Downstream
Occupation	OPERATIONS –LPG/PROPANE (GAS PROCESSING PLANT/
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO.2015/3134.0200
Minimum Educational Qualification & Experience	Completed 2nd year of the 3-year Diploma (after 10th) OR 10th Grade Pass plus 2-year of National Trade Certificate (NTC) OR 8th Grade pass plus 2-years of NTC plus 1-year NAC OR 12th Grade Pass OR 11th Grade pass with 1- year of relevant experience OR 10th Grade pass with 2-years relevant experience OR NA
Minimum Level of Education for	NA
Minimum Job Entry Age	18 years
Last Reviewed On	03-May-2023

## Qualification Pack

Next Review Date	02-May-2026
NSQC Approval Date	03-May-2023
Version	1.0

## **HYC/N4201 Perform LPG bottling plant operations**

### **Description**

This unit is about performing LPG bottling plant operation. Receive, Fill, Store and conduct safety and maintenance operation as per the SOP.

### **Scope**

This unit/task covers the following:

- Receipt and purging of LPG cylinders
- Filling of LPG cylinders
- Storage of filled and empty LPG cylinders
- Cold repair of cylinders
- Dispatch of filled LPG cylinders

### **Elements and Performance Criteria**

#### *Receipt and purging of LPG cylinders*

To be competent, the user/individual on the job must be able to;

- PC1. receive empty cylinders from distributor or from authorized cylinders manufacturers/repairers
- PC2. check for spurious/OMC cylinder and inform the supervisor or concern authority
- PC3. inform shortage receipt of cylinder or cap to the supervisor or concern authority
- PC4. send all the cylinders due for mandatory testing
- PC5. carry out purging of all the newly received cylinders or cylinders received after mandatory testing/hot repair.

#### *Filling of LPG Cylinders*

To be competent, the user/individual on the job must be able to;

- PC6. fill good and usable empty cylinders conforming to IS-13258 to the extent of the capacity of each such LPG cylinder
- PC7. check for any Valve leak, Bung Leak, O-ring leak and Body leak as per prescribed procedure
- PC8. cap and seal the all filled cylinders passing all the Quality Control (QC) tests
- PC9. calibrate filling scales and Quality Control (QC) equipment regularly
- PC10. send filled cylinder for storage/dispatch

#### *Storage of filled and empty LPG cylinders*

To be competent, the user/individual on the job must be able to;

- PC11. stack the filled cylinder at cylinders storage shed within the earmarked place as per the prescribed rules
- PC12. stack all empty cylinders in capped condition with proper identification/segregation mark
- PC13. maintain inventory of filled and empty cylinders

### *Cold repair of cylinders*

To be competent, the user/individual on the job must be able to;

- PC14. carry out cold repair of defective cylinders such as Pin leak, Bung leak, O-ring leak, Body leak, Bend Foot ring and/or Stay plate

### *Dispatch of filled LPG cylinders*

To be competent, the user/individual on the job must be able to;

- PC15. dispatch good conditioned filled LPG cylinders as per the instruction of concerned authority
- PC16. coordinate for loading/unloading of LPG filled/empty cylinders from trucks
- PC17. prepare daily/weekly/monthly statement of dispatches of LPG filled cylinders

### *Scrap Disposal*

To be competent, the user/individual on the job must be able to;

- PC18. store scrap such as cylinders/regulators/valves with reason of rejection
- PC19. dispose scrap, cylinder and crushing of valve as per the SOP

### *Safety and security*

To be competent, the user/individual on the job must be able to;

- PC20. maintain safety and security at LPG bottling plant and LPG storage area

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- KU1. the basic principle of LPG operation
- KU2. the importance of calibration of tools and instruments
- KU3. standard operating procedures while working
- KU4. relevant health and safety requirements applicable to the work place
- KU5. potential hazards, risks and threats based on the nature of work
- KU6. the importance of personal protective equipment used during welding operation
- KU7. ways of efficiently managing material and water in the process
- KU8. the difference between recyclable/reusable and waste material

## **Generic Skills (GS)**

User/individual on the job needs to know how to:

- GS1. read and interpret engineering drawings
- GS2. measure and scale the weight of cylinder
- GS3. assess complexity and criticality of task
- GS4. communicate effectively with team members
- GS5. complete tasks efficiently and accurately within stipulated time
- GS6. work with supervisors/team members to carry out work related tasks

- GS7. perform basic mathematical calculation  
GS8. plan and organize the marketing activity

### Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC1. receive empty cylinders from distributor or from authorized cylinders manufacturers/repairers	1	2		
PC2. check for spurious/OMC cylinder and inform the supervisor or concern authority	1	1		
PC3. inform shortage receipt of cylinder or cap to the supervisor or concern authority	1	2		
PC4. send all the cylinders due for mandatory testing	1	1		
PC5. carry out purging of all the newly received cylinders or cylinders received after mandatory testing/hot repair	1	2		
PC6. fill good and usable empty cylinders conforming to IS-13258 to the extent of the capacity of each such LPG cylinder	1	1		
PC7. check for any Valve leak, Bung Leak, O-ring leak and Body leak as per prescribed procedure	1	2		
PC8. cap and seal the all filled cylinders passing all the Quality Control (QC) tests	1	1		
PC9. calibrate filling scales and Quality Control (QC) equipment regularly	1	2		
PC10. send filled cylinder for storage/dispatch	1	1		
PC11. stack the filled cylinder at cylinders storage shed within the earmarked place as per the prescribed rules	1	2		
PC12. stack all empty cylinders in capped condition with proper identification/segregation mark	1	1		
PC13. maintain inventory of filled and empty cylinders		2		
PC14. carry out cold repair of defective cylinders such as Pin leak, Bung leak, Oring leak, Body leak, Bend Foot ring and/or Stay plate	1	1		
PC15. dispatch good conditioned filled LPG cylinders as per the instruction of concerned authority	1	2		
PC16. coordinate for loading/unloading of LPG filled/empty cylinders from trucks	1	1		

## Qualification Pack

PC17. prepare daily/weekly/monthly statement of dispatches of LPG filled cylinders	1	2		
PC18. store scrap such as cylinders/regulators/valves with reason of rejection	1	1		
PC19. dispose scrap, cylinder and crushing of valve as per the SOP	1	2		
PC20. maintain safety and security at LPG bottling operation and LPG storage area	1	1		
<b>NOS Total</b>	<b>20</b>	<b>30</b>	-	-



### National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	<b>HYC/N 4201</b>
<b>NOS Name</b>	Perform LPG Bottling Plant operations
<b>Sector</b>	Hydrocarbon
<b>Sub-Sector</b>	Midstream
<b>Occupation</b>	Bottling Plant Operation
<b>NSQF Level</b>	4
<b>Credits</b>	8
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	03-May-2023
<b>Next Review Date</b>	02-May-2026
<b>NSQC Clearance Date</b>	03-May-2023

## HYC/N9301 Working effectively in a team

### Description

This unit covers basic practices that improve effectiveness of working in a team in an organizational set-up

### Scope

This unit/task covers the following:

- Effective team work

### Elements and Performance Criteria

#### *Effective team work*

To be competent, the user/individual on the job must be able to:

- PC1. maintain clear communication with colleagues
- PC2. pass on information to colleagues in line with organizational requirements
- PC3. work in a team and support the team members
- PC4. work in ways that show respect to colleagues
- PC5. fulfil commitments made to colleagues
- PC6. inform team members timely, if timelines can't be met
- PC7. take the necessary initiatives to resolve the issues while working in team

### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. the organization's policies and procedures related to team work in workplace
- KU2. the importance of effective communication and establishing good working relationships with colleagues
- KU3. Knowledge of gender concepts, issues & legislation
- KU4. the importance of creating an environment of trust and mutual respect
- KU5. the implications of own work on the work and schedule of others
- KU6. the standard practice in organization w.r.t communication at various levels
- KU7. the instructions at individual level or at group level
- KU8. individual work responsibility and corrective measures required to complete task in time
- KU9. the importance of personal qualities like discipline and confidence to achieve success in work assigned

### Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1. communicate effectively in writing
- GS2. read instructions, guidelines/procedures
- GS3. communicate information effectively
- GS4. make decisions on a suitable course of action or response keeping in view resource utilization while meeting commitments
- GS5. how to plan the work to meet the deadline

- GS6. the importance of consistent and reliable services for customer satisfaction
- GS7. apply problem solving approaches in different situations
- GS8. apply balanced judgments to different situations

**Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Effective teamwork</i>	<b>20</b>	<b>30</b>		
<b>PC1.</b> maintain clear communication with colleagues	2	4	-	-
<b>PC2.</b> pass on information to colleagues in line with organisational requirements	3	5	-	-
<b>PC3.</b> work in a team and support the team members	3	4	-	-
<b>PC4.</b> work in ways that show respect to colleagues	3	4	-	-
<b>PC5.</b> fulfil commitments made to colleagues	3	5	-	-
<b>PC6.</b> inform team members timely, if timelines can't be met	3	4	-	-
<b>PC7.</b> take the necessary initiatives to resolve the issues while working in team	3	4	-	-
<b>NOS Total</b>	<b>20</b>	<b>30</b>	-	-

**National Occupational Standards (NOS) Parameters**

<b>NOS Code</b>	HYC/N9301
<b>NOS Name</b>	Working effectively in a team
<b>Sector</b>	Hydrocarbon
<b>Sub-Sector</b>	Generic
<b>Occupation</b>	Generic
<b>NSQF Level</b>	2
<b>Credits</b>	2.5
<b>Version</b>	3.0
<b>Last Reviewed Date</b>	03-May-2023
<b>Next Review Date</b>	02-May-2026
<b>NSQC Clearance Date</b>	03-May-2023

## **HYC/N9302: Maintain health, safety and security procedures**

### **Description**

This unit covers maintaining health, safety and security procedures at the workplace. This includes procedures and practices that candidates need to follow to help maintain a healthy, safe and secure work environment

### **Scope**

This unit/task covers the following:

- Practice health and safety measures
- Follow fire safety procedures
- Follow emergencies, rescue and first-aid procedures

### **Elements and Performance Criteria**

#### *Practice health and safety measures*

To be competent, the user/individual on the job must be able to:

- PC1.** use protective clothing/equipment for specific tasks and work conditions
- PC2.** identify documents, location and people responsible for health and safety in the workplace
- PC3.** identify possible causes of risk or accident in the workplace
- PC4.** carry out safe working practices while dealing with hazards to ensure the safety of self and others
- PC5.** lift heavy objects safely using correct procedures
- PC6.** identify common safety signs, displayed in various areas

#### *Follow fire safety procedures*

To be competent, the user/individual on the job must be able to:

- PC7.** use the various appropriate fire extinguishers on different types of fires correctly
- PC8.** follow rescue techniques applied during fire hazard
- PC9.** follow good housekeeping practice in order to prevent fire hazards
- PC10.** list issues concerning the safety in work place
- PC11.** inform fire safety department about any near-miss incidents in the work place
- PC12.** follow the applicable laws, regulations and codes as per safety standard
- PC13.** prepare written accident/incident report and share with the concerned officer/department

#### *Follow emergencies, rescue and first-aid procedures*

To be competent, the user/individual on the job must be able to:

- PC14.** provide appropriate first aid to victims in emergency situation
- PC15.** demonstrate basic techniques of bandaging
- PC16.** respond promptly and appropriately to an accident
- PC17.** perform rescue activity during an accident in real or simulated environments
- PC18.** demonstrate correct method to rescue injured people and others during an emergency

### Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1. company's policies on personnel management and duty reporting procedure
- KU2. reporting structure within organization
- KU3. how to escalate problem
- KU4. concept of "hazards" and "risks"
- KU5. health and safety hazards commonly affecting the work environment and related precautions
- KU6. preventative and remedial actions to be taken in the case of exposure to toxic materials
- KU7. importance of using protective clothing/equipment while working
- KU8. various causes of fire
- KU9. techniques of using different types of fire extinguishers
- KU10. different materials used for extinguishing fire
- KU11. various types of safety signs and their significance

### Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1. communicate by writing
- GS2. read instructions, guidelines/procedures and reports
- GS3. communicate effectively and share the information efficiently
- GS4. identify and report potential sources of danger
- GS5. how to plan the work to meet the deadline
- GS6. the importance of on time services
- GS7. apply problem solving approaches in different situations
- GS8. apply balanced judgments to different situations

**Assessment Criteria**

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Practice health and safety measures</i>	<b>9</b>	<b>15</b>		
<b>PC1.</b> use protective clothing/equipment for specific tasks and work conditions	1	4	-	-
<b>PC2.</b> identify documents, location and people responsible for health and safety in the workplace	2	1	-	-
<b>PC3.</b> identify possible causes of risk or accident in the workplace	1	3	-	-
<b>PC4.</b> carry out safe working practices while dealing with hazards to ensure the safety of self and others	2	2	-	-
<b>PC5.</b> lift heavy objects safely using correct procedures	1	3	-	-
<b>PC6.</b> identify common safety signs, displayed in various areas	2	2	-	-
<i>Follow fire safety procedures</i>	<b>12</b>	<b>16</b>		
<b>PC7.</b> use the various appropriate fire extinguishers on different types of fires correctly	2	2	-	-
<b>PC8.</b> follow rescue techniques applied during fire hazard	2	2	-	-
<b>PC9.</b> follow good housekeeping practice in order to prevent fire hazards	2	2	-	-
<b>PC10.</b> list issues concerning the safety in work place	1	3	-	-
<b>PC11.</b> inform fire safety department about any near-miss incidents in the work place	2	2	-	-
<b>PC12.</b> follow the applicable laws, regulations and codes as per safety standard	1	3	-	-
<b>PC13.</b> prepare written accident/incident report and share with the concerned officer/department	2	2	-	-
<i>Follow emergencies, rescue and first-aid procedures</i>	<b>4</b>	<b>19</b>		
<b>PC14.</b> provide appropriate first aid to victims in emergency situation	1	4	-	-



<b>PC15.</b> demonstrate basic techniques of bandaging	1	4	-	-
<b>PC16.</b> respond promptly and appropriately to an accident	0	3	-	-
<b>PC17.</b> perform rescue activity during an accident in real or simulated environments	1	4	-	-
<b>PC18.</b> demonstrate correct method to rescue injured people and others during an emergency	1	4	-	-
<b>NOS Total</b>	<b>25</b>	<b>50</b>		

**National Occupational Standards (NOS) Parameters**

<b>NOS Code</b>	HYC/N9302
<b>NOS Name</b>	Maintain health, safety and security procedures
<b>Sector</b>	Hydrocarbon
<b>Sub-Sector</b>	Generic
<b>Occupation</b>	Generic
<b>NSQF Level</b>	2
<b>Credits</b>	2.5
<b>Version</b>	3.0
<b>Last Reviewed Date</b>	03-May-2023
<b>Next Review Date</b>	02-May-2026
<b>NSQC Clearance Date</b>	03-May-2023

### Assessment Guidelines and Assessment Weightage

#### Assessment Guidelines

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 the proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on the knowledge bank of questions created by the SSC.
3. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.
4. Individual assessment agencies will create unique question papers for the theory part for each candidate at each examination/training center (as per assessment criteria below).
5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.
6. To pass the Qualification Pack assessment, every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.
7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack.

**Recommended Pass % aggregate for QP: 70**

**Assessment Weightage**

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
HYC/N4201 LPG bottling plant operations	20	30	-	-	50	60
HYC/N9301 Working effectively in a team	20	30	-	-	50	20
HYC/N9302 Maintain health, safety and security procedures	25	50			75	20
<b>Total</b>	<b>65</b>	<b>110</b>	<b>-</b>	<b>-</b>	<b>175</b>	<b>100</b>

### Acronyms

NOS – National Occupational Standard(s)

OS – Occupational Standard(s)

NSQF – National Skills Qualifications Framework

QP – Qualifications Pack

KU – Knowledge and Understanding

GS – Generic Skills

## Glossary

<b>Sector</b>	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
<b>Sub-sector</b>	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
<b>Occupation</b>	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
<b>Job role</b>	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
<b>Occupational Standards(OS)</b>	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
<b>Performance Criteria(PC)</b>	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
<b>National Occupational Standards(NOS)</b>	NOS are occupational standards which apply uniquely in the Indian context.
<b>Qualifications Pack(QP)</b>	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
<b>Unit Code</b>	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
<b>Unit Title</b>	Unit title gives a clear overall statement about what the incumbent should be able to do.
<b>Description</b>	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
<b>Scope</b>	Scope is a 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 quality of performance required.

<p><b>Knowledge and Understanding (KU)</b></p>	<p>Knowledge and Understanding (KU) are statements that together specify the technical, generic, professional and organisational specific knowledge that an individual need in order to perform to the required standard.</p>
<p><b>Organisational Context</b></p>	<p>Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.</p>
<p><b>Technical Knowledge</b></p>	<p>Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.</p>
<p><b>Core Skills/Generic Skills(GS)</b></p>	<p>Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today’s world. These skills are typically needed in any work environment in today’s world. These skills are typically needed in any work environment. In the context of the OS, these include communication-related skills that are applicable to most job roles.</p>
<p><b>Electives</b></p>	<p>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.</p>
<p><b>Options</b></p>	<p>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.</p>