



Model Curriculum

QP Name: Project Supervisor - City Gas Distribution (CGD)

QP Code: HYC/Q6307

QP Version: 2.0

NSQF Level: 5

Model Curriculum Version: 2.0

Hydrocarbon Sector Skill Council
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Training Parameters

Sector	Hydrocarbon
Sub-Sector	Downstream
Occupation	Operations - Oil and Gas pipeline
Country	India
NSQF Level	5
Aligned to NCO/ISCO/ISIC Code	NCO/2015/NIL
Minimum Educational Qualification and Experience	12th Grade pass with 2 years of relevant experience OR Completed 1-year UG program (Petroleum/Mechanical/Pipeline Engineering) (UG Certificate) OR Completed 1st year of Diploma (Petroleum/Mechanical/ Pipeline Engineering) (after 12th) OR 12th Grade Pass with 1-year National Trade Certificate NTC) OR Completed 3-year Diploma (Petroleum/Mechanical/Pipeline Engineering) after 10th with 1-year of relevant experience
Pre-Requisite License or Training	NA
Minimum Job Entry Age	20 years
Last Reviewed On	
Next Review Date	Three years from the date of approval
NSQC Approval Date	
QP Version	2.0
Model Curriculum Creation Date	
Model Curriculum Valid Up to Date	Three years from the date of approval
Model Curriculum Version	2.0
Minimum Duration of the Course	-
Maximum Duration of the Course	570 Hours

Program Overview

This section summarizes the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills.

- Identify and organize material and manpower requirements for the installation on CGD gas pipeline.
- Prepare various plans for the execution and completion of project on time.
- Supervise various activities related to CGD pipeline installation, construction and testing.
- Prepare and maintain reports, records and documents related to CGD gas pipeline installation project as per organizational procedures.
- Follow health, safety procedures during marketing activity
- Work effectively with colleagues and other marketing team members

Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and ModuleDetails	Theory Duration	Practical Duration	On-the-Job Training Duration	Total Duration
Bridge Module	06:00	Nil	Nil	06:00
Module 1: Introduction to Hydrocarbon Sector and the job role of Project Supervisor – City Gas Distribution (CGD)	06:00	Nil	Nil	06:00
HYC/ N6311 – Manage work and resources related to City Gas Distribution (CGD) pipeline installation NOS Version No. – 2.0 NSQF Level – 5	60:00	210:00	60:00	330:00
Module 2: Manage work and resources related to CGD pipeline installation	60:00	210:00	60:00	330:00
HYC/N9301 – Working effectively in a team NOS Version No. – 3.0 NSQF Level – 4	30:00	45:00	Nil	75:00
Module 3: Effective working in a team	30:00	45:00	Nil	75:00
HYC/N9302 – Maintain health, safety and security procedures NOS Version No. – 3.0 NSQF Level 4	24:00	45:00		69:00
Module 4: Health, safety and security	24:00	45:00		69:00
DGT/VSQ/N0102 - Employability Skills NOS Version No. – 1.0	-	-	-	90:00
Total Duration	120:00	300:00	60:00	570:00

Module Details

Module 1: Introduction to Hydrocarbon Sector and the job role of Project Supervisor - City Gas Distribution (CGD)

Bridge Module

Terminal Outcomes:

- Discuss about Hydrocarbon Sector
- Discuss the job role of Project Supervisor - City Gas Distribution (CGD)

Duration: 06:00	Duration: 00:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the oil and natural gas sector and its subsectors. • Explain the importance Project Supervisor - City Gas Distribution (CGD). • Discuss role and responsibilities of Project Supervisor - City Gas Distribution (CGD). 	
Classroom Aids:	
<ul style="list-style-type: none"> • White / Black board and Projector • Digital Presentation • Computer/Laptop • Public Addressing System 	
Tools, Equipment and Other Requirements	
NA	

Module 2: Manage work and resources related to CGD pipeline installation

Mapped to HYC/N6311, v2.0

Terminal Outcomes:

- Perform steps to identify and arrange manpower, tools, material etc. requirements for CGD pipeline installation.
- Prepare plans and schedules for the installation of CGD pipeline.
- Perform steps to supervise installation and testing activities of pipeline.
- Identify various documents and records to be maintained related to CGD gas pipeline installation project.

Duration: 60:00	Duration: 180:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe basic principles of hydrocarbon product and hazards involved in it. • Discuss the necessary precautions to avoid any hazard and accidents at work. • Discuss the importance of organizational policies and procedures. • Discuss the information derived from the route layout and identify the manpower and resources requirement. • List the steps to be performed for procuring the tools, raw material etc. required for work. • Discuss various documents or plans needed to be prepared related to CGD pipeline installation work. • Discuss the administrative procedures to be followed for approval of project execution plan. • Discuss the need of setting key responsibilities of each team member before starting the work. • Discuss methods to assign tasks to team members. • Discuss the importance of maintaining minimum required stock in inventory all the time. • Explain functioning of inventory management software. • Discuss technical specifications and requirements for the installation of pipeline. • List the steps to be performed for installation, construction, pipeline laying a and testing of CGD pipeline. 	<ul style="list-style-type: none"> • Read route layout to identify and plan manpower and resources requirement. • Show how to prepare purchase orders for the procurement of tools, raw material etc. by following organisational procedures. • Role plays a situation on how to co-ordinate with the vendors or procurement team for procurement of tools, raw material etc. required. • Perform the steps to prepare a sample project execution plan, monitoring plan, review checklist of each activity and backup plan for each activity. • Prepare plan to divide key responsibilities between the team members. • Role play a situation on how to assign tasks to team members by following organisational procedures. • Apply appropriate method to analyse material, tools etc. demand and maintain minimum stock in hand. • Demonstrate use of inventory management software for updating status of stock in inventory. • Role play a situation on how to co-ordinate with the contractor for determining technical specifications and requirements of the pipeline. • Employ appropriate methods to supervise installation, construction, pipeline laying and testing activities of CGD pipeline. • Apply appropriate methods to check gas filling system, compressors & contractors

<ul style="list-style-type: none"> • List the steps to be performed for conducting safety checks at workplace. • Elaborate methods to review project progress. • Discuss various methods of waste disposal. • Discuss the importance of completing activities of project as planned. • Discuss how to maintain various reports, documents and records related to CGD pipeline installation work. • Explain the importance of communicating in local language • Explain PNGRB T4S Compliances 	<p>for following health, safety and environment (HSE) standards.</p> <ul style="list-style-type: none"> • Conduct review meetings for the evaluation of project progress. • Show how to dispose waste as per organisational guidelines. • Perform steps to review the completed tasks and get the certification of statutory / competent authority. • Perform steps to prepare a sample project completion report for the concerned authority. • Role play a situation on how to report deviations in project plan and take approval from concerned authority for any changes in plan. • Demonstrate how to use GPS • Demonstrate organisational procedure of maintaining attendance and hour wise details of each staff members. • Show how to conduct internal and external audit of the project activities and maintain records related to it.
<p>Classroom Aids:</p>	
<p>White / Black board and Projector, Digital Presentation, Computer/Laptop, Public Addressing System</p>	
<p>Tools, Equipment and Other Requirements</p>	
<p>Sample route layout, Inventory management software, PPE Kit, Sample reporting format, Sample audit format, Sample work distribution chart, Sample material indent format, Sample inward / outward register, Health, safety, and environment (HSE) standards SOP, Sample waste disposal SOP, Sample accident reporting format, Fire extinguisher</p>	

Module 3: Effective working in a team

Mapped to HYC/N9301, v3.0

Terminal Outcomes:

- Describe how to interact with others effectively and appropriately.
- Demonstrate how to deal with colleagues at workplace

Duration: 30:00	Duration: 60:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe methods to communicate clearly with the supervisor and reporting authorities. • Explain how to share information in line with organisational requirements. • Explain the organisation’s policies and procedures. • Explain how to identify causes of interpersonal conflict at workplace. • Describe methods to resolve interpersonal conflict. • Explain the importance of gender equality. • Explain the importance of supporting and respecting colleagues and other members of the organisation without any bias based on gender, culture, disability etc. • Explain the importance of gender-neutral behaviour while interacting with others. 	<ul style="list-style-type: none"> • Demonstrate methods to handle interpersonal conflict at the workplace. • Demonstrate the methods of developing suitable rapport with other team members. • Demonstrate role of marketing agent during emergencies. • Demonstrate how to communicate in a manner that is respectful of gender, culture and disability. • Demonstrate how to handover the documents to the concern team
<ul style="list-style-type: none"> • Classroom Aids: 	
<ul style="list-style-type: none"> • White / Black board and Projector • Digital Presentation • Computer/Laptop • Public Addressing System 	
Tools, Equipment and Other Requirements	
<ul style="list-style-type: none"> • Dummy team 	

Module 4: Health, safety and security

Mapped to HYC/N9302, v3.0

Terminal Outcomes:

- Identify the possible cause of accident and hazards
- Explain how to maintain safety and healthy environment
- Demonstrate how to use PPE kit at workplace

Duration: 24:00	Duration: 60:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain importance of using PPE like face mask, hand gloves, goggle, protective clothing/equipment, etc. at workplace • Explain how to monitor the health and safety of self and other team members • Explain the hazard and risk associated with mishandling various tools and equipment • Discuss safe work practices as per the company’s guidelines and procedures • Explain the good housekeeping practices to prevent any hazard • Explain how to record and report all incidents, damages or injury • Explain importance of personal and workplace hygiene 	<ul style="list-style-type: none"> • Demonstrate how to appropriately wear and discard PPE kit • Demonstrate how to respond promptly and appropriately to an accident • Demonstrate how to administer first aid • Demonstrate various rescue techniques • Demonstrate how to use fire extinguishers • Show the correct way to lift heavy objects. • Demonstrate SOP’s, Safety pamphlets, Do & Don’t at workplace
Classroom Aids:	
<ul style="list-style-type: none"> • White / Black board and Projector • Digital Presentation • Computer/Laptop • Public Addressing System 	
Tools, Equipment and Other Requirements	
<ul style="list-style-type: none"> • First aid kit • Dummy for first aid treatment • Housekeeping kit • Personal Protective Equipment (PPE) 	

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
Graduate	Mechanical	2	(Petroleum/ Mechanical/ Pipeline Engineering)	1	(Petroleum/ Mechanical/ Pipeline Engineering)	-

Trainer Certification	
Domain Certification	Platform Certification
"Project Supervisor - City Gas Distribution(CGD), HYC/Q6307, v2.0". Minimum accepted score is 80%	"Trainer, MEP/Q2601, v1.0". Minimum accepted score is 80%.

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
Graduate	Mechanical	2	(Petroleum/ Mechanical/ Pipeline Engineering)	1	(Petroleum/ Mechanical/ Pipeline Engineering)	-

Assessor Certification	
Domain Certification	Platform Certification
“Project Supervisor - City Gas Distribution (CGD), HYC/Q6307, v1.0”. Minimum accepted score is 80%	“Assessor, MEP/Q2701, v1.0”. Minimum accepted score is 80%.

Assessment Strategy

The assessment of candidates/trainees will be on the basis on assessment outcome/assessment criteria of the Qualification. In the assessment criteria for each NOS marks have been defined for theoretical and practical skills, on which the candidate will be assessed. The emphasis is on 'learning-by-doing' and performance criteria is based on the practical demonstration of skills and knowledge.

Theory/Knowledge test– This section will test the trainee on his/her knowledge on the subject/trade. The test will be carried out online/offline with a set of random Question paper. that include multiple choice questions in multilingual, True/False Statement, audio-video question etc.

The Question Bank will be developed by Subject Matter Experts (SME) of the hydrocarbon sector and these questions again be vetted by the Industry Experts, each performance criteria have its marks for theory based on the level of question i.e. easy, medium and difficult.

Practical/Demonstration Test– This stage involves the face-to-face interaction between Assessor and each trainee. The practical knowledge will be tested through trade test which demonstrates the skill required for the job, by which assessor would be able to evaluate the trainee for his/her practical knowledge on respective Qualification.

To ensure the maximum possible consistency in the assessment by different assessors at different locations, orientation of the assessors is also required about the stages involved in the assessment and the assessor role in the assessment process. The assessor must have knowledge of the following concepts before assessment:

- Qualification Pack Structure
- Guidance for the assessor to conduct theory and practical assessments
- Guidance for trainees to be given by assessor before the start of the assessments.
- Guidance on assessments process, practical brief with steps of operations practical observation checklist
- Practical/Demonstration Test guidance for uniformity and consistency.
- Guidance on assessment evidence collection (signed attendance copy, verification of the authenticity of the candidate by checking the photo ID card, Photographs-while assessment undergoing etc.)

The empaneled assessment agencies will be instructed to hire assessors with integrity, reliability and fairness. Each assessor shall sign a document with its assessment agency by which they commit themselves to comply with the rules of confidentiality and conflict of interest, independence from commercial and other interests that would compromise impartiality of the assessments. The assessment agencies are instructed to ideally have assessor with sufficient amount of relevant industry experience related to Qualification. The assessors will also have scrutinized and have to undergo orientation of assessment framework, competency-based assessments etc.

Recognition of Prior Learning (RPL)

Under the Recognition of Prior Learning (RPL), the candidates enrolled and the assessment will be carried out as per the assessment criteria and assessment outcome of the full Qualification and the process of assessment will be carry out by the body/bodies empaneled by Hydrocarbon Sector Skill Council

In RPL, the candidate already has the skills and knowledge while working on the job from long, the learners only require to undergo a brief orientation training and the subsequent assessment process and certification is awarded to those candidates who successfully clears the assessment. The tentative process of RPL would include the following stages:

1. Cluster Mapping and Mobilization of the candidates
2. Counselling & Pre-Screening
3. Candidate registration, batch creation and enrolment
4. Conduct an orientation program for candidates before assessment
5. Assessment by HSSC
6. Evaluation of Assessment Result
7. Issuance of the Certificate to successful candidates

Assessment Strategy:

- For each Qualification Pack assessment criteria has been developed, which describe the weightage for each NOS/Performance criteria (PC) and assigned marks based on each NOS separately for theoretical and practical skills
- The question bank will be developed by the subject matter experts to assess the theoretical and practical knowledge.
- The accredited assessment agency will carry out the assessment process on the date proposed after completion of the training. The assessment will be carried out on the basis of the two parameters i.e. Theoretical test and Practical test.
- The result of the assessment will be shared by assessment body to the HSSC for review and compliance, after that result will be processed and certificates will be generated
- Assessments shall be conducted in the regional languages in case of any specific requirement from the concerned Training Provider.
- For ensuring the impartial assessment it will be ensured that the Assessment Bodies (AB) are not involved in any type of training delivery with respect to this project.

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%

References

Glossary

Term	Description
Sector	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.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards(OS)	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.
Performance Criteria(PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards(NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack(QP)	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 qualification pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	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.
Scope	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.
Knowledge and Understanding(KU)	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.
Organisational Context	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.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/Generic Skills(GS)	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.

Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.

Acronyms and Abbreviations

Term	Description
NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
OS	Occupational Standard(s)
QP	Qualifications Pack
KU	Knowledge and understanding
GS	Generic Skills