

Model Curriculum

Wastewater Treatment Plant Helper

SECTOR: GREEN JOBS
SUB-SECTOR: WATER MANAGEMENT
OCCUPATION: OPERATION & MAINTENANCE
REF ID: SGJ/Q6602, V1.0
NSQF LEVEL: 3



Certificate

CURRICULUM COMPLIANCE TO QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

SKILL COUNCIL FOR GREEN JOBS

for the

MODEL CURRICULUM

Complying to National Occupational Standards of
Job Role/Qualification Pack: '**Wastewater Treatment Plant Helper**' QP No. '**SGJ/Q 6602 NSQF Level 3**'

Date of Issuance: December 10th, 2015

Valid up to: December 1st, 2018

* Valid up to the next review date of the Qualification Pack


Authorised Signatory
(Skill Council for Green Jobs)

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Wastewater Treatment Plant Helper

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Wastewater Treatment Plant Helper”, in the “Green Jobs” Sector/Industry and aims at building the following key competencies amongst the learner

Program Name	Wastewater Treatment Plant Helper		
Qualification Pack Name & Reference ID	SGJ/Q6602, v1.0		
Version No.	1.0	Version Update Date	20 th September 2016
Pre-requisites to Training	8 th Pass		
Training Outcomes	After completing this programme, participants will be able to: <ul style="list-style-type: none">• Maintain the Wastewater Treatment Plant• Assist the Supervisor in Wastewater Treatment Plant• Work safety at Wastewater Treatment Plant		

This course encompasses 3 out of 3 National Occupational Standards (NOS) of "Wastewater Treatment Plant Helper" Qualification Pack issued by "Skill Council for Green Jobs".

S. No	Module	Key Learning Outcomes	Equipment Required
1	Wastewater Treatment Plant Industry Theory Duration (hh:mm) 06:00 Practical Duration (hh:mm) 06:00 Corresponding NOS Code SGJ/N6603	<ul style="list-style-type: none"> Explain what is wastewater and general concepts of effluent disposal, recycle and re-use of treated wastewater Understand the importance of Wastewater treatment, know-how about the industry and career prospects Understand basic skills required to perform the job of Wastewater Treatment Plant Helper Explain basic terminology used in the wastewater industry Explain broadly the stages of treatment 	On the job training in a wastewater treatment plant
2	Types of Wastewater and its Treatment Theory Duration (hh:mm) 06:00 Practical Duration (hh:mm) 06:00 Corresponding NOS Code SGJ/N6603	<ul style="list-style-type: none"> Acquire knowledge about the different sources of wastewater generation Explain the environmental effects of untreated wastewater Explain the significance and benefits of wastewater treatment 	On the job training in a wastewater treatment plant
3	Wastewater Treatment Plant and its Components Theory Duration (hh:mm) 06:00 Practical Duration (hh:mm) 12:00 Corresponding NOS Code SGJ/N6603, SGJ/N6604	<ul style="list-style-type: none"> Acquire know-how about types of wastewater treatment plants Describe the functions of various components of wastewater treatment plant Follow Standard Operating Procedures (SOPs) as directed by Supervisor for working on components of WWTP Operate the components as per Supervisor's instructions in a safe, timely and efficient manner. 	On the job training in a wastewater treatment plant
4.	Wastewater Treatment Process Theory Duration (hh:mm) 04:00 Practical Duration	<ul style="list-style-type: none"> Identify various stages associated with treatment of wastewater treatment, including primary, secondary, and tertiary levels. Identify the various components and their purpose as a part of the stages of wastewater treatment process 	On the job training in a wastewater treatment plant

	(hh:mm) 10:00 Corresponding NOS Code SGJ/N6603		
5.	Operate Wastewater Treatment Plant Theory Duration (hh:mm) 06:00 Practical Duration (hh:mm) 14:00 Corresponding NOS Code SGJ/N6603	<ul style="list-style-type: none"> • Explain Standard Operating Procedures to operate Wastewater Treatment Plant, as instructed by supervisor • Assist supervisor by adding chemicals and microbes for water treatment subject to instructions. • Operate oil skimmer, different valves and filling of drums as per supervisor's instructions. 	On the job training in a wastewater treatment plant
6.	Maintenance of Wastewater Treatment Plant Theory Duration (hh:mm) 10:00 Practical Duration (hh:mm) 34:00 Corresponding NOS Code SGJ/N6604	<ul style="list-style-type: none"> • Explain the importance of maintenance of Wastewater Treatment Plant • Understand and carry out the Implementation of a Maintenance Plan as per established typical Maintenance Procedures by supervisor • Record all gauge and meter readings to assist supervisor's monitoring activity • Understand classification of different types of filters, valves & tanks and how they are cleaned or replaced • Perform general plant maintenance as per SOP • Assist supervisor to maintain service records of electro mechanical equipment in the plant • Recognize any anomalous functioning of equipment and perform timely escalation of technical issue to supervisor. • Assist supervisor in rectifying malfunctioned equipment, its after effects, and carry out preventive and corrective measures as per instructions received from supervisor. 	On the job training in a wastewater treatment plant

7.	Work Safety at Wastewater Treatment Plant Theory Duration (hh:mm) 12:00 Practical Duration (hh:mm) 28:00 Corresponding NOS Code SGJ/N6605	<ul style="list-style-type: none"> Identify the personal protective equipment used for the specific purpose Understand and acquire know-how of Safety Measures to be taken when in project site Identify general risks, including working at height and hazards associated with different tasks in a Wastewater Treatment Plant Understand and acquire know-how of Safety Measures when handling Mechanical Parts in statutory or moving position Understand and acquire know-how of Safety procedure while handling Chemical and Organic Matter Identify the Do's and Don'ts for safe work area Administer first aid 	On the job training in a wastewater treatment plant
	Theory Duration (hh:mm) 50:00 Practical Duration (hh:mm) 110:00	On the job training in a wastewater treatment plant	

Grand Total Course Duration: 160 Hours, 0 Minutes

(This syllabus/ curriculum has been approved by [Skill Council for Green Jobs](#))

Trainer Prerequisites for Job role: “Wastewater Treatment Plant Helper” mapped to Qualification Pack: “SGJ/Q6602, v1.0”

Sr. No.	Area	Details
1	Description	To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack “SGJ/Q6602, Version 1.0”.
2	Personal Attributes	Aptitude for conducting training, and pre/ post work to ensure competent, employable candidates at the end of the training. Strong communication skills, interpersonal skills, ability to work as part of a team; a passion for quality and for developing others; well-organised and focused, eager to learn and keep oneself updated with the latest in the mentioned field.
3	Minimum Educational Qualifications	ITI /Diploma or B.Tech or The education qualification can be relaxed in case of extraordinary relevant field experience.
4a	Domain Certification	Certified for Job Role: “Wastewater Treatment Plant Helper” mapped to QP: “SGJ/Q6602, Version 1.0”. Minimum accepted score as per Skill Council for Green Jobs is 80%.
4b	Platform Certification	Recommended that the Trainer is certified for the Job Role: “Trainer”, mapped to the Qualification Pack: “MEP/Q0102”. Minimum accepted score as per SCGJ is 70%.
5	Experience	<ul style="list-style-type: none"> • Minimum 3 years of relevant industry experience for ITI /Diploma Or • Minimum 2 years of relevant industry experience for B.Tech

Annexure: Assessment Criteria

Assessment Criteria for Wastewater Treatment Plant Helper	
Job Role	Wastewater Treatment Plant Helper
Qualification Pack	SGJ/Q6602, Version 1.0
Sector Skill Council	Skill Council for Green Jobs

Sr. No.	Guidelines for Assessment
1	Criteria for assessment for Qualification Pack has been created based on the NOSs and performance criteria by SCGJ. Each Performance Criteria (PC) has been assigned marks proportional to its importance within NOS and weightages have also been given among the NOSs accordingly. SCGJ has laid down the proportion of marks for Skills, Theory/Knowledge and Behaviour / Attitudes for each PC.
2	The assessment of the theory/knowledge will be based on written test/viva-voce or both while skill test shall be hands on practical. Behaviour and attitude will be assessed while performing the task.
3	The assessment shall be done as per the assessment sheets devised by SCGJ and accordingly the assessment agencies in consultation with SCGJ will create unique question papers for theory/knowledge and attitude for each candidate at each SCGJ accredited testing centres (as per assessment criteria below)
4	The assessment agencies will conduct the assessment as per the guidelines given by SCGJ having unique evaluations for skill practical for every student at each SCGJ accredited testing centre based on this criteria
5	To pass the Qualification Pack, every trainee should score a minimum of 50% in the overall assessment.
6	The marks are allocated PC wise; however, every NOS will carry a weight age in the total marks allocated to the specific QP

NOS	Performance Criteria	Marks Allocation			
		Total	Out of	Theory	Practical
SGJ/N6604 Maintain the Wastewater Treatment Plant	PC1. Measure and record all meter and gauge readings	30	6	3	3
	PC2. Perform maintenance on filters & valves.		6	2	4
	PC3. Perform Cleaning of Tanks		6	2	4
	PC4. Perform Cleaning of Work area and equipment.		6	3	3
	PC5. Visually inspect the discharge periodically at delivery point for any anomalies		6	2	4
	TOTAL		30	12	18
SGJ/N6603 Assist Supervisor in Wastewater Treatment Plant.	PC1. Assist cleaning of different screens.	20	6	3	3
	PC2. Assist in operating different valves.		6	3	3
	PC3. Operate oil skimmer and fil drums as required.		3	1	2

	PC4. Perform the addition of chemicals and microbes to treat water as required under the supervision of a senior.		2	1	1
	PC5. Assist in completing the documentation as required.		3	1	2
	TOTAL		20	9	11
SGJ/N6605 Work Safety at Wastewater treatment plant	PC1. Identify the hazards associated with different tasks in a Wastewater Treatment Plant	50	12	5	7
	PC2. Inform the concerned person of the accident and hazard occurred		5	2	3
	PC3. Select the right Personal Protective equipment for different tasks in a Waste Treatment Plant		12	5	7
	PC4. Perform the changing of chlorine cylinders safely		8	3	5
	PC5. Ensure safe storage of corrosive substances		8	3	5
	PC6. Ensure Health & Safety by following company policies & processes and industry standards for work safety		5	2	3
	TOTAL		50	20	30