



QUALIFICATION FILE

Junior Technician- Mechanized Sewer Cleaning

Short Term Training (STT)

Future Skills

NCrF/NSQF Level: 3

Submitted By:

Skill Council for Green Jobs

Chief Executive Officer

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Section 1: Basic Details

1	Qualification Name	Junior Technician- Mechanized Sewer Cleaning								
2	Sector/s	Waste Management								
3	Type of Qualification: <input checked="" type="checkbox"/> New	NQR Code & version of existing/previous qualification:& version 1	Qualification Name of existing/previous version: Junior Technician- Mechanized Sewar Cleaning SGJ/Q4006							
4	a. OEM Name b. Qualification Name (Wherever applicable)	Junior Technician- Mechanized Sewar Cleaning								
5	National Qualification Register (NQR) Code &Version	& version 1	6. NCrf/NSQF Level: 3							
7	Award (Certificate/Diploma/Advance Diploma/ Any Other)	Certificate								
8	Brief Description of the Qualification	Junior Technician- Mechanized Sewar Cleaning , is an individual, who is responsible for emptying, cleaning, transport and disposal of sludge from the sewer line to a specified site/Co-treatment plant. He /She has to operate and maintain Mechanized sewage cleaning machine, Sludge Vacuum tank with trucks, pumps, suction hoses, and other machinery/equipment to empty the manholes.								
9	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">S. No.</th> <th style="width: 60%;">Academic/Skill Qualification (with Specialization - if applicable)</th> <th style="width: 30%;">Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>5th Grade pass</td> <td style="text-align: center;">with 5 years of relevant experience#.</td> </tr> </tbody> </table>			S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	5th Grade pass	with 5 years of relevant experience#.
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)								
1	5th Grade pass	with 5 years of relevant experience#.								

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		2	Grade 8 pass with two years of (NTC/ NAC) after 8 th	NIL																						
	b. Age: 18 Year	3	8th Grade Pass	with 2 years of relevant experience																						
		3	Previous relevant Qualification of NSQF Level 2.5	1.5 years																						
		4	Previous relevant Qualification of NSQF Level 2	3 Years																						
		<i># Relevant work experience includes experience in Waste/ waste water management or in a related field</i>																								
1 Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	11	11. Common Cost Norm Category: I																								
1 Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)	NA																									
1 Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)	<input checked="" type="checkbox"/> Offline <input type="checkbox"/> Online <input type="checkbox"/> Blended <table border="1"> <thead> <tr> <th>Training Delivery Modes</th> <th>Theory (Hours)</th> <th>Practical (Hours)</th> <th>OJT Mandatory (Hours)</th> <th>OJT Recommended (Hours)</th> <th>Employability (Hours)</th> <th>Total (Hours)</th> </tr> </thead> <tbody> <tr> <td>Classroom (offline)</td> <td>90</td> <td>120</td> <td>90</td> <td></td> <td>30</td> <td>330</td> </tr> <tr> <td>Online</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> (Refer Blended Learning Annexure for details)					Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Employability (Hours)	Total (Hours)	Classroom (offline)	90	120	90		30	330	Online						
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Employability (Hours)	Total (Hours)																				
Classroom (offline)	90	120	90		30	330																				
Online																										
1 Aligned to NCO/ISCO Code/s (if no code is available mention the same)	NCO-2015/9613.0500 Sweeper, Sewer																									

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1 Progression path after attaining the qualification (Please show Professional and Academic progression)	Vertical Progression: Entrepreneurship: Entrepreneur- Faecal Sludge Management (Level 4) Organization value chain: Faecal Sludge Treatment Plant O&M Technician(Level 4)
1 Other Indian languages in which the Qualification & Model Curriculum are being submitted	Nil
1 Is similar Qualification(s) available on NQR-if yes, justification for this qualification	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
1 Is the Job Role Amenable to Persons with Disability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If "Yes", specify applicable type of Disability: <input checked="" type="checkbox"/> Deaf <input checked="" type="checkbox"/> Hard of Hearing <input checked="" type="checkbox"/> Acid Attack Victims <input checked="" type="checkbox"/> Dwarfism
1 How Participation of Women will be Encouraged	The programme would be proposed to be incorporated in women ITIs and diploma colleges to train women candidates on the job role. TPs shall be encouraged to onboard at least a certain number of female candidates in each batch
2 Are Greening/ Environment Sustainability Aspects Covered (Specify the NOS/Module which covers it)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2 Is Qualification Suitable to be Offered in Schools/Colleges	Schools <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Colleges <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2 Name and Contact Details of Submitting / Awarding Body SPOC	Name: Dr. Praveen Saxena Email: ceo@sscgi.in Contact No.: 9871119101 Website: https://sscgi.in/

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	(In case of CS or MS, provide details of both Lead AB & Supporting ABs)		
2	Final Approval Date by NSQC:	24. Validity Duration: 3 years	25. Next Review Date:

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Section 2: Module Summary

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/N SQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT	Emp.	Total	Th.	Pr.	P r o j .	V i v a	Total	Weightage (%) (if applicable)
1.	NOS: Introduce Faecal Sludge management and outline various opportunities for SSWs	SGJ/N4040 Version 1	Core	3	2	37:30	22:30			60:00	90	60			150	33
2.	NOS: Maintain health and safety at faecal Sludge Management site	SGJ/N4041 Version 1	Core	3	2	07:30	22:30			30:00	45	55			100	22
3.	NOS: Perform Sewer Cleaning with Mechanised Equipment	SGJ/N4042 Version 1	Core	3	2	45:00	75:00			120:00	94	56			150	33
4.	Employability Skill	DGT/VSQ/ N0101	Core	3	1					30:00	20	30			50	12
5.	On the Job Training									90:00						
Duration (in Hours) / Total Marks						90	120	90	30	330	249	201			450	

NOS/s of Qualifications

(In exceptional cases these could be described as components)

Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/ Module level. For further details refer curriculum document.

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Th.-Theory **Pr.**-Practical **OJT**-On the Job **Man.**-Mandatory **Training Rec.**-Recommended **Proj.**-Project

Assessment - Minimum Qualifying Percentage

Minimum Pass Percentage – Aggregate at qualification level: 70 % (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)

Section 3: Training Related

1.	Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	10 th Pass with two years of experienced in machine usage and from sanitation background
2.	Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	10 th Pass with three years of experienced in machine usage and from sanitation background
3.	Tools and Equipment Required for Training	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If "Yes", details to be provided in Annexure)
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	Not Applicable

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Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	10 th Pass with three years of experienced in machine usage and from sanitation background
2.	Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	10 th Pass with four years of experienced in machine usage and from sanitation background
3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	10 th Pass with four years of experienced in machine usage and from sanitation background
4.	Assessment Mode (Specify the assessment mode)	Online and offline both
5.	Tools and Equipment Required for Assessment	<input checked="" type="checkbox"/> Same as for training <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (details to be provided in Annexure-if it is different for Assessment)

Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

1.	Latest Skill Gap Study (not older than 2 years) (Yes/No): Yes available at https://sscgi.in/wp-content/uploads/2022/03/Green-Jobs-Report-Jan27.pdf
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): Yes following key documents are available in the public domain a. https://sscgi.in/wp-content/uploads/2022/03/Green-Jobs-Report-Jan27.pdf b. https://cmeri.res.in/technology/mechanized-drain-cleaning-system

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3.	<p>Government /Industry initiatives/ requirement (Yes/No): This QP is largely relevant to Municipal Corporations and contractors working in the field of collection of waste.</p> <p>SSC would undertake validation of the job roles with actual end-user industry where such employment is going to be generated and absorbed instead of generic validation of industry. The SSC would submit the endorsements from users/intended users of the qualification clearly supporting or otherwise the need for trained people against specific job role. (The industry validation format to be used)</p> <p>The qualification on Mechanized sewage cleaning is of much relevance in managing the Sewage Sludge. As of now, the Indian cities do not have formal mechanisms of providing cleaning sludge of sewages and septic tank services. Most of the sewage cleaning exist in the cities are working informally and also not using proper health and safety measures consistently. Safe collection, handling and transport of sewage sludge is an integral part of septage management but has received limited attention so far. In the urban areas as per the Census of India 2011, the total number of households connected with the septic tanks is 3.0087 lakhs which is 38.15 percent of the total households. However, under the Swachh Bharat Mission - Urban, around 66.42 lakhs new individual toilets and 5.08 Lakhs seat of community and public toilets have to be constructed and most of them are connected with the septic tanks.</p> <p>The National FSSM policy -2017 says that the septic tanks/sewer need to be cleaned once in four/five years. The cities also need to implement the schedules desludging of septic tank services. However, there is a need for skilled sanitation army which can be engaged in desludging services. This QP on Mechanized sewage cleaning Technician (would help in creating the skilled workers. These skilled workers would work on the collection and transportation of the sludge. This is clearly an area that needs urgent attention. MoHUA has shortlisted type of machineries and core equipments required for maintenance works, safety gear for Safai Mitras (workers engaged in sewer maintenance and desludging operations). The same is also available on the Government e-Marketplace (GeM) portal for ease of their procurement by States/ULBs. The objectives are adequate availability of required equipment for mechanized desludging. MoHUA also developed a tool to calculate the required workforce and equipment for ULBs to meet their requirements depending upon their population, existing sewer networks and peculiar issues faced by them which can help ULBs to plan for mechanized desludging. Provision of central financial assistance for desludging has been made available for less than 1 lakh population cities under Swachh Bharat Mission – Urban.</p> <p>Evidence of the qualification is supported by validations with representation from across sub sectors. The complete list of validating companies has been enclosed as an annexure to the Q file.</p>
4.	<p>Number of Industry validation provided: Up to 10 industry validations are expected to be received for the qualification.</p>
5.	<p>Estimated nos. of persons to be trained and employed A large number of workers shall be employed primarily at Mechanized sewage cleaning sites as India embarks on boosting its Mechanized Sewage cleaning capacity. There is a significant increase in manpower requirements which is driven by government policies and initiatives like “Swachh Bharat mission”, Smart City scheme etc. It is estimated that Mechanized sewage cleaning will increase significantly and new jobs opportunities shall be created. Most of these will be created in the private sector. With so much focus on promoting improved sanitation services, Industry shall require trained and skilled manpower to perform a range of functions in Mechanized</p>

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	<p>cleaning services. Job estimates related to Mechanized sewage cleaning system include secondary data research and interactions with stakeholders and experts, it is reflected that a total number of trained workers needed for desludging services of onsite and offsite sanitation system increases every year with approximately 50,000 required by 2025. Skill development of the workforce engaged in sanitation and waste/wastewater management would lead to significant employment opportunities and has emerged as a new area for effective service delivery, particularly for the staff working in actual service delivery such as waste collection, categorization, segregation, handling of hazardous waste, landfill management, Sewage Treatment Plants (STPs), etc. Trainings directed towards sensitizing and enabling the key officials to proactively take measures for creating a safe occupational space for frontline sanitation workers and SafaiMitras. The trainings will also orient the officials towards key laws, protocols, guidelines, welfare schemes and initiatives available for workers and hence develop their capacity to become guides for ensuring social protection and upliftment. The underlying theme of this training component shall be to equip key stakeholders to prioritize and enhance the safety and dignity of sanitation workers.</p>
6.	<p>Evidence of Concurrence/Consultation with Line Ministry/State Departments: Concurrence has been requested from the Ministry of Housing and Urban Affairs</p>

Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	<p>Annexure: NCrf/NSQF level justification based on NCrf level/NSQF descriptors <i>(Mandatory)</i></p>	<p>Annexure: Evidence of Level</p>
2.	<p>Annexure: List of tools and equipment relevant for qualification <i>(Mandatory, except in case of online course)</i></p>	<p>Annexure: Tools and Equipment (Lab Set-Up)</p>
3.	<p>Annexure: Detailed Assessment Criteria <i>(Mandatory)</i></p>	<p>Annexure: Detailed Assessment Criteria (Mandatory)</p>
4.	<p>Annexure: Assessment Strategy <i>(Mandatory)</i></p>	<p>Annexure: Assessment Strategy</p>

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5.	Annexure: Acronym and Glossary <i>(Optional)</i>	Annexure: Acronym and Glossary
6.	Supporting Document: Model Curriculum <i>(Mandatory – Public view)</i>	Attached
7.	Supporting Document: Career Progression <i>(Mandatory - Public view)</i>	Annexure: Career progression and OM
8.	Supporting Document: Occupational Map <i>(Mandatory)</i>	Annexure: Career progression and OM
9.	Supporting Document: Assessment SOP <i>(Mandatory)</i>	Annexure: Assessment Strategy

Annexure: Evidence of Level

Title/Name of qualification/component: Junior Technician- Mechanized Sewer Cleaning		Level: 3	
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relate to the NSQF level descriptors	NSQF Level
Professional Theoretical Knowledge/ Process	<ul style="list-style-type: none"> Junior Technician- Mechanized Sewer Cleaning is responsible for the following processes: Operation of Mechanized sewage cleaning Machine Preventive Maintenance of the machine. Inspect and tighten the connections and loose fittings. Carry out cleaning of sludge vacuum tank after disposal 	A professionally trained individual to work at level 3 who will be responsible for carrying out a range of jobs which will be routine and predictable such Mechanized sewage cleaning and emptying of septic tank and transportation and safe disposal of sludge while solving of any problems related to his scope of work. Job holders will be responsible for carrying out a limited range of jobs under close supervision and their work may require the completion of a	3

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Title/Name of qualification/component: Junior Technician- Mechanized Sewer Cleaning		Level: 3	
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relate to the NSQF level descriptors	NSQF Level
	<ul style="list-style-type: none"> transportation and safe disposal of sludge Ensure that sludge vehicle is not leaking during the transit process Ensure safe disposal of sludge at the disposal site. 	number of related tasks with septic tank operations. People carrying out these job roles may be described as “partly-skilled workers”	
Professional and Technical Skills/ Expertise/ Professional Knowledge	<ul style="list-style-type: none"> Junior Technician- Mechanized Sewer Cleaning should have knowledge of: <ul style="list-style-type: none"> Knowledge of Maintaining Mechanized sewage cleaning System, septic tank emptying services Dos and don'ts of Mechanized sewage cleaning services of the septic tanks. No fire or flame should be used near the septic tanks as there may be inflammable gases inside septic tanks Knowledge of inserting and connecting pipes Knowledge of handing the vacuum tank Knowledge of health and safety procedure Zero involvement of manual Scavenging. Personal protection equipment including the use of related safety gears & equipment's 	<p>The Job holder is expected to possess a range of practical and cognitive skills required to accomplish tasks and solve problems by selecting and applying basic methods and tools and operate and maintain systems and provide post installation support. The job holder also has to ensure preparation of effective installation plan for setting up Mechanized sewage cleaning system. Thus, considering the professional skills the job holder can be placed at Level 4.</p> <p>Since the job holder is expected to exhibit cognitive skills along with practical skills required to accomplish the tasks and solve problems by identifying system needs and preparing solutions, identifying problems in operation and maintenance, etc. s/he can't be placed at Level 3.</p> <p>And as the job holder is not expected to possess practical and cognitive skills required to generate solutions for specific problems related to Mechanized sewage cleaning, but rather expected to generate solutions specific to Mechanized sewage cleaning, s/he can't be placed at level 3</p>	3

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Title/Name of qualification/component: Junior Technician- Mechanized Sewer Cleaning		Level: 3	
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relate to the NSQF level descriptors	NSQF Level
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	The individual is expected to plan & organize the schedule for all operation and maintenance and related activities to be undertaken by self or by the team. Further s/he must be able to take decisions on a regular basis, manage relationship with colleagues and apply domain knowledge to perform tasks related to Mechanized sewage cleaning. S/he is also expected to critically evaluate information obtained from the manufacturer and teams to create relevant solutions.	<p>The job holder is expected to represent and demonstrate practical skills, which are routine and repetitive in a narrow range of application such as checking the mechanical and electrical equipment’s using standard protocols.</p> <p>Since all the above-mentioned professional skill are related to demonstrating practical skills, which are routine and repetitive in a narrow range and using appropriate rule and tool, the role qualifies for Level 3.</p> <p>The Job holder expected to possess professional skills more than just demonstrating practical skills, which are routine and repetitive in a narrow range but also using appropriate rules & tools to identify and communicate to the Supervisor. Example, S/he is expected to use practical skills and basic fundamental principles of Mechanized sewage cleaning. He should have knowledge pertaining to operate different tools and equipment required for continuity of Mechanized sewage cleaning. Hence, the role can’t be placed at Level 3.</p>	3
Broad Learning Outcomes/ Core Skill	The individual is expected to exhibit fluent communications skills, networking skills with fellow Technician & is capable of understanding the need of fellow Technician. The individual is expected to exhibit effective communication skills by communicating clearly with the helpers and understanding the instructions given by the Supervisor at the site. Further, the individual is expected to perform respective record maintaining work and use basic	The Job holder is expected to be possess the technical capabilities for preparing the Mechanized sewage cleaning plan and its execution for Mechanized sewage cleaning, etc., interact effectively with Technician, skill of collecting and organizing information for them, understanding requirements of the local site to prepare solutions, etc. and communication skill for so as to interact effectively with fellow technician.	3

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Title/Name of qualification/component: Junior Technician- Mechanized Sewer Cleaning		Level: 3	
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relate to the NSQF level descriptors	NSQF Level
	<p>arithmetic/ algebraic principles. The individual has to carry out the following task:</p> <ul style="list-style-type: none"> Assist other colleagues in performing tasks in a positive manner where required and possible Consult and assist others to maximize effectiveness and efficiency in carrying out tasks Demonstrate appropriate communication etiquette while working Demonstrate active listening skills while interacting with others at work Demonstrate responsible and disciplined behaviour at the workplace Escalate grievances and problems to appropriate authority as per procedure to resolve them and avoid conflict Ensure collaboration and group participation to achieve common goals 	<p>Thus, considering the core skills, s/he can be placed at Level 4.</p> <p>The Job holder is expected to exhibit core skills more than language to communicate with required clarity, basic algebraic and arithmetic skill and basic understanding of socio- political environment. For example, s/he is supposed to organize and collect information regarding the local energy usage practices through discussions, etc., And since the job holder requires only some skill of collecting and organizing information but doesn't need to be reasonably good and only the desired mathematical skill restricted to the Mechanized sewage cleaning, s/he can't be placed at Level 5.</p>	
Responsibility	<p>The individual is primarily responsible for performing the following task:</p> <ul style="list-style-type: none"> Responsible for his own work and learning Check that deep sludge should be left in the bottom of septic tank as per the industry standard and government norms Check that the septic tank is properly closed Clean their surroundings and pipes before leaving the site Check that sludge vehicle is not leaking during the transit process Check safe disposal of sludge at the disposal site 	<p>The Technician- Mechanized sewage cleaning is responsible for his/ her own work as s/he has to ensure Operation and Maintenance of Mechanized sewage cleaning through identification of suitable skills. updating self with industry trends and skills and to an extent influence subordinate's works and learning as s/he is responsible for passing knowledge and skills to his/ her team of Junior technicians and helpers.</p>	3

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Title/Name of qualification/component: Junior Technician- Mechanized Sewer Cleaning		Level: 3	
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relate to the NSQF level descriptors	NSQF Level
	<ul style="list-style-type: none"> Carry out cleaning of sludge vacuum tank after disposal 	<p>Considering the responsibilities, the individual can be placed at level 4.</p> <p>Since the Job holder responsibility is not limited till his/her own work & learning but also encompasses some responsibilities for others learnings as s/he is expected to ensure knowledge transfer to team members s/he can't be placed at 3.</p> <p>As the number of people reporting to him/her may be less and the individual may not have large teams working across multiple functions, s/he can't be placed at level 5.</p>	

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Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size:

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1	Portable Pump Set, Manila Rope and Cloth Ball, Sectional Sewer Rods, Sewer Cleaning Bucket Machine, Dredger (Clam-Shell), Roding Machine with Flexible Sewer Rods, Scraper	Standard Make	
2	Personnel Protective Equipment, First aid kit, Material Safety Data Sheet, Gas leakage detector	Standard Make	
3	Tool kit, IR Thermometer ,Barometer, Double ended flat spanner, Double ended ring spanner, Wrenches, Combination pliers, Side cutting pliers, Nose pliers, Screw driver, Vanier caliper, hammer, Cutters, Tweezers, Stripping & Crimping Tools, Safety helmet, electronic pressure gauge, clamp meter, multimeter, gas leakage detector, Nose mask, Safety goggles, Ear plug, PVC hand glove, Cotton hand glove, Reflective jacket, Safety Gloves ,Chemical Mask, Leather gloves, flame proof aprons, Flame proof overalls buttoned to neck, Helmets/hard hats, Full body harness, Hand shields, , fire extinguishers, First aid equipment, Safety instruments	Standard Make	

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Classroom Aids

The aids required to conduct sessions in the classroom are:

Marker, chart and visual aid, Pellet production flowchart, raw material supply chain flow chart, Schematics of Solar Domestic Product production plant;

Annexure: Industry Validations Summary

Provide the summary information of all the industry validations in table. This is not required for OEM qualifications.

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1.	Ansha Services	Alka Awasthi	Proprietor	Basement, B-6/17, Safdarjung Enclave Main Road, South Delhi - 110029	9971411888	Sales1@anshaservices.com	NA
2.	Conserve India	Anita Ahuja	Co- Founder & President	A116, Madhuban, Vikas Marg, Delhi - 110092	9999501200	anita@conserveindia.org	NA
3.	Kleenwel Enviro Engineering Services	Amaresh Awasthi	CEO	624, Somdutt Chambers-II, Bikaji Cama Place, Delhi - 110066	9811094836	ceo@kleenwelenviro.com	NA
4.	Kam Foundation	Dr. Smita Singh	CEO	Plot No. 2, S. No. 255/1, Hinjewadi, Pune - 411057	981091409	ceo@kamfoundation.com	NA
5.							
6.							
7.							
8.							
9.							
10.							

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Annexure: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools:

Refer NCVET “Guidelines for Blended Learning for Vocational Education, Training & Skilling” available on:

<https://ncvet.gov.in/sites/default/files/Guidelines%20for%20Blended%20Learning%20for%20Vocational%20Education,%20Training%20&%20Skilling.pdf>

S. No.	Select the Components of the Qualification	List Recommended Tools – for all Selected Components	Offline : Online Ratio
1	<input checked="" type="checkbox"/> Theory/ Lectures - Imparting theoretical and conceptual knowledge	Colour code nomenclature chart of pipes hoses and valves, Mechanized sewage cleaning unit, flowchart, components of Mechanized Sewage Cleaning system	60:40
2	<input checked="" type="checkbox"/> Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	Small size/demonstration units of Mechanized sewage cleaning machine, Visit to a Mechanized sewage cleaning site; Tool kit, IR Thermometer ,Barometer, Double ended flat spanner, Double ended	
3	<input checked="" type="checkbox"/> Showing Practical Demonstrations to the learners		

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4	<input checked="" type="checkbox"/> Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	ring spanner, Wrenches, Combination pliers, Side cutting pliers, Nose pliers, Screw driver, hammer, Cutters, Tweezers, Stripping & Crimping Tools, Safety helmet, electronic pressure gauge, multimeter, gas leakage detector, Nose mask, Safety goggles, Ear plug, PVC hand glove, Cotton hand glove, Reflective jacket, Safety Gloves ,Chemical Mask, Leather gloves, flame proof aprons, Flame proof overalls buttoned to neck, Helmets/hard hats, Full body harness, Hand shields, , fire extinguishers, First aid equipment, Safety instruments	
5	<input checked="" type="checkbox"/> Tutorials/ Assignments/ Drill/ Practice		
6	<input checked="" type="checkbox"/> Proctored Monitoring/ Assessment/ Evaluation/ Examinations		
7	<input checked="" type="checkbox"/> On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training		

Annexure: Detailed Assessment Criteria

Detailed assessment criteria for each NOS/Module are as follows:

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes			
	Theory	Practical	Project Marks	Viva Marks
Module 1: Introduction to Mechanized Cleaning	20	30		
Module 2: Provision and Entitlements for SSW- Role of ULB	20	30		
Module 3: Health & Safety at Workplace	20	30		
Module 4: Checklist for accepting the sanitation service request	20	30		
Module 5: Steps to be followed for mechanized cleaning of sewers	40	60		

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Module 6:Post Mechanized Cleaning of Sewers Checklist	20	30		
Module 7: Entrepreneurship through SUY Scheme	20	30		
Module 8: Education and Health of SSW	20	30		
Module 9 : Employability Skills	20	30		
Grand Total	200	300		

Annexure: Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program.

1. Assessment System Overview:

- Batches assigned to the assessment agencies for conducting the assessment on SDSM/SIP or email
- Assessment agencies send the assessment confirmation to VTP/TC looping SSC
- Assessment agency deploys the ToA certified Assessor for executing the assessment
- SSC monitors the assessment process & records

2. Testing Environment:

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- Confirm that the centre is available at the same address as mentioned on SDMS or SIP
- Check the duration of the training.
- Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
- Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.
- Check the mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).
- Confirm the number of TABs on the ground are correct to execute the Assessment smoothly.
- Check the availability of the Lab Equipment for the particular Job Role.

3. Assessment Quality Assurance levels / Framework:

- Question papers created by the Subject Matter Experts (SME)
- Question papers created by the SME verified by the other subject Matter Experts
- Questions are mapped with NOS and PC
- Question papers are prepared considering that level 1 to 3 are for the unskilled & semi-skilled individuals, and level 4 and above are for the skilled, supervisor & higher management
- Assessor must be ToA certified & trainer must be ToT Certified
- Assessment agency must follow the assessment guidelines to conduct the assessment

4. Types of evidence or evidence-gathering protocol:

- Time-stamped & geotagged reporting of the assessor from assessment location
- Center photographs with signboards and scheme specific branding
- Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period
- Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos

5. Method of verification or validation:

- Surprise visit to the assessment location
- Random audit of the batch
- Random audit of any candidate

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6. Method for assessment documentation, archiving, and access

- Hard copies of the documents are stored
- Soft copies of the documents & photographs of the assessment are uploaded / accessed from Cloud Storage
- Soft copies of the documents & photographs of the assessment are stored in the Hard Drives

On the Job:

OJT Monitoring Report

- As in Green Jobs Sector, reproducing the evidence for assessment is not feasible due to constraints like cost, confidentiality and controlled environment, every
- Apprentice is required to record the evidences performed during the OJT and the same gets authorized by his/her supervisor.
- The evidence recording is done in a structured monitoring report, termed as OJT Monitoring report.
- During the OJT, every trainee is required to fill the OJT monitoring report which is required to be signed by his/her supervisor.
- Towards the end of OJT period these reports are submitted with the HR department of company
- These duly submitted reports are then verified by an Industry nominated assessor for verification of evidence.

Theory, Practical & Viva:

- Scope – Is used to test the knowledge and understanding and skills acquired during the OJT as well as to conform the OJT monitoring report.
- Some personality traits and generic skills (such as – promptness, sharpness, communication skills, depth of knowledge, comprehension, presentation, patience
- etc) can also be tested, which is also required for the QP.
- Tools – The assessment's questions should be aligned with the Qualification Pack, covering the PCs. There will be summative assessment at the end of the OJT.
- Method – Direct questions open and close ended questions, situation-based questions, analytical questions, and decision-making based questions for Viva,
- MCQ for the theory and performing QP related operations for practical. Different questions in theory, practical and viva are included to test relevant PCs from
- the QP
- Analysis – Assessor draws a spectrum of ready answers to be expected from trainee for Viva. This reduces effect of subjectivity of the assessor.
- Comparative
- Quality of trainees within a batch or different institutes can be gauged. The skill is gauged by observing the practical work.

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Execution of OJT Assessment:

- HR department hands over the individual OJT monitoring report with Industry nominated assessor and schedules an assessment meeting for each trainee.
- Industry nominated assessor assesses each trainee based on OJT monitoring report, viva on each PC and also takes into account attendance of each trainee towards the end of the OJT period.
- The OJT marks are compiled for each NOS by the Industry nominated assessor and submitted with HR department of company.
- The OJT assessment results are then sent to SCGJ by HR department of company in a sealed envelope for compiling the assessment results in case of offline assessment.

Annexure: Acronym and Glossary

Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register

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NSQF	National Skills Qualifications Framework
OJT	On the Job Training

Glossary

Term	Description
National Occupational Standards (NOS)	NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.
Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities on the basis of their main economic function, product, service or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. https://ncvet.gov.in/sites/default/files/NCVET.pdf

Annexure: Annexure: Career Progression and OM

QUALIFICATION FILE : STT

