

NSQF QUALIFICATION FILE

Approved in 23rd NSQC Meeting, Dated: 29th September 2022

Rationalized in 24th NSQC Meeting – NCVET – Dated 17.11.2022

CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE

Name and address of submitting body:

Skill Council for Green Jobs,
CIBP Building, Malcha Marg,
Chankyapuri, New Delhi - 110021

NCVET Code

2022/ES/SCGJ/06731

Name and contact details of individual dealing with the submission

Name: Dr. Praveen Saxena

Position in the organisation: Chief Executive Officer

Address if different from above: (Same as above)

Tel number(s): 9871119101

E-mail address: ceo@sscgj.in

List of documents submitted in support of the Qualifications File

1. Occupational Map
2. Model Curriculum

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SUMMARY

1	Qualification Title	Desludging Operator
2	Qualification Code, if any	SGJ/Q6403
3	NCO code and occupation	NCO-2015/9613.0500 Sweeper, Sewer
4	Nature and purpose of the qualification (Please specify whether qualification is short term or long term)	Nature of Qualification: - Responsibility for own work and learning (Long term) Main purpose of the qualification: - Emptying, transport and disposal of faecal sludge from the septic tank to identified desludging site / Faecal Sludge Treatment Plant.
5	Body/bodies which will award the qualification	Skill Council for Green Jobs
6	Body which will accredit providers to offer courses leading to the qualification	Skill Council for Green Jobs
7	Whether accreditation/affiliation norms are already in place or not , if applicable (if yes, attach a copy)	Yes
8	Occupation(s) to which the qualification gives access	Operator
9	Job description of the occupation	The Desludging Operator, also known as Sludge Emptier is an individual, who is responsible for emptying, transport and disposal of faecal sludge from the septic tank/sewer line to desludging site / FSTP / Co-treatment plant. He /She has to operate Sludge Vacuum tank with trucks, pumps, suction hoses, and other machinery/equipment to empty the septic tank./sewer line. Desludging operator would further specialised as an entrepreneur, He / She would be trained to venture into desludging services for managing Faecal Sludge.
10	Licensing requirements	N/A
11	Statutory and Regulatory requirement of the relevant sector (documentary evidence to be provided)	

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12	Level of the qualification in the NSQF	3
13	Anticipated volume of training/learning required to complete the qualification	360 Hours
14	Indicative list of training tools required to deliver this qualification	Different types and sizes of vacuum tank with trucks, pumps, suction hoses, and other machinery/equipment to empty the septic tank, Hand sanitizer/soap, Hand gloves, helmet/ cap, appropriate mask to cover face, reflective vest. (One for each candidate), gum boots etc.
15	Entry requirements and/or recommendations and minimum age	Ability to read and write with 5 years of relevant experience OR 5 th Pass+3 years of experience in masonry/plumbing work OR 8 th Pass+1 year of experience in masonry/plumbing work OR 9 th Pass Minimum Job entry age: 18 years
16	Progression from the qualification (Please show Professional and academic progression)	Desludging Operator (Level 3) to Entrepreneur-Faecal Sludge Management (Level 4)
17	Arrangements for the Recognition of Prior learning (RPL)	SCGJ recognizes that there may be candidates who have prior learning experience in the waste management and are desirous of being certified. <ul style="list-style-type: none">•Propose to carry out RPL for candidates working in desludging operation•Identify the candidates through training need analysis of the industry•Develop the RPL curriculum and bridge course for bridging the skill gap•Training and certification of the candidates
18	International comparability where known (research evidence to be provided)	ISCO-08/9613
19	Date of planned review of the	28 th September 2025

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qualification.			
20	Formal structure of the qualification The entries made here will show how the qualification is designed for delivery and assessment		
	Mandatory components		
	Title of component and identification code/NOSs/Learning outcomes	Estimated size (learning hours)	Level
(i)	SGJ/N6411: Emptying of Septic tank and Sewer lines	90	3
(ii)	SGJ/N6412: Preventive maintenance, transportation and safe disposal of sludge	90	3
(iii)	SGJ/N6410: Maintain personal health & safety in FSSM	60	3
(iv)	Employability Skills(30 hr)	30	2
(v)	On the Job Training	90	
	Total	360	

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SECTION 1

ASSESSMENT

21	Body/Bodies which will carry out assessment: Skill Council for Green Jobs through its accredited Assessment Agency
22	How will RPL assessment be managed and who will carry it out? The RPL assessment will be carried out through pre-assessment, identifying the skills gaps, provide bridge training to cover the competency gap, where required, and then conduct final assessment of the candidates. NCVET Affiliated and SCGJ accredited Assessment Agency will carryout assessment as per RPL Policy and Guidelines
23	Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, reliable and fair and show that these are in line with the requirements of the NSQF. 1. Assessment System Overview: <ul style="list-style-type: none">• 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• If the batch size is more than 30, then there should be 2 Assessors. 2. Testing Environment: Assessor must: <ul style="list-style-type: none">• Confirm that the centre is available at the same address as mentioned on SDMS or SIP

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- 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 should be verified by the other subject Matter Experts along with the approval required from SSC
- Questions are mapped with NOS and PC
- Question papers are prepared considering that level 1 to 3 is for the unskilled & semi-skilled individuals, and level 4 and above are for the skilled, supervisor & higher management
- Assessor must be ToA 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
- Centre photographs with signboards and scheme specific branding
- Biometric or manual attendance sheet (stamped by TP) of the

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	<p>trainees during the training period</p> <ul style="list-style-type: none">• Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos <p>5. Method of verification or validation:</p> <ul style="list-style-type: none">• Surprise visit to the assessment location• Random audit of the batch• Random audit of any candidate <p>6. Method for assessment documentation, archiving, and access</p> <ul style="list-style-type: none">• Hard copies of the documents are stored• Soft copies of the documents & photographs of the assessment are uploaded / accessed from Cloud Storage and are stored in the Hard Drives
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Please attach most relevant and recent documents giving further information about assessment and/or RPL.

Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

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24. Assessment evidences

CRITERIA FOR ASSESSMENT OF TRAINEES

Title of Component: Desludging Operator

Qualification Pack: SGJ/Q6403-v 2.0

Guidelines for Assessment

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. 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 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 this criterion.
6. To pass the Qualification Pack, 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.

Outcome Please refer to the QP-NOS for the Assessment outcome

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SECTION 2

25. EVIDENCE OF LEVEL

OPTION A

Title/Name of qualification/component: Desludging Operator		Level: 3	
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
Process	<p>The Desludging Operator is responsible for the following processes:</p> <ul style="list-style-type: none">▪ Emptying of septic tank▪ Clean their surroundings and pipes before leaving the site▪ Carry out cleaning of sludge vacuum tank after disposal▪ 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	<p>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 as 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 number of related tasks with septic tank operations. People carrying out these job roles may be described as “partly-skilled workers”</p>	3
Professional	Desludging Operator (Option: Entrepreneur)	The job holder is expected to exhibit an	3

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Title/Name of qualification/component: Desludging Operator			Level: 3
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
knowledge	<p>should have knowledge of:</p> <ul style="list-style-type: none"> • Knowledge of septic tank emptying services • Dos and don'ts of desludging 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 Installation of pipes • Knowledge of handing the vacuum tank • Knowledge of health and safety procedure • Knowledge of manual scavenging act 2013 • Personal protection equipment including the use of related safety gears & equipment's 	<p>understanding of Basic facts, processes, and principles applied in desludging trade/Faecal Sludge management. such as various methods of extraction of sludge. S/he should also have the ability to speak read and write in the local vernacular language or English.</p>	
Professional skill	<p>The job holder is expected to recall and demonstrate the practical skills like:</p> <ul style="list-style-type: none"> • Installation of pipe in the septic tank connecting with sludge tank • Check the meter on the septic tank before pumping out the sludge 	<p>Further, the job holder must be able to Recall and demonstrate practical skill, routine, and repetition in a narrow range of applications, such as checking the civil foundations and mechanical structures of desludging tanks using basic protocols.</p>	3

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Title/Name of qualification/component: Desludging Operator			Level: 3
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
	<ul style="list-style-type: none"> Uninstall the suction pipes from the septic tank Clean their surroundings and pipes before leaving the site. Transport the sludge from source of sludge to disposal site Carry out cleaning of sludge vacuum tank after disposal 	They will be expected to understand what constitutes quality in Faecal Sludge management and to distinguish between good and bad quality in the context of the jobs they are given.	
Core skill	<ul style="list-style-type: none"> 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 arithmetic/algebraic principles. The individual has to carry out the following task: 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 	The job holder is expected to exhibit good Communication skills - written and oral, with minimum required clarity so as to understand the instructions of the customer as well as clearly instruct helpers while carrying out the desludging activities. The job holders shall also have the skills of basic arithmetic and algebraic principles, personal banking, and a basic understanding of the social and natural environment. The job holder is also expected to possess reading and writing skills so as to read and understand equipment manuals, health and safety instructions, various signage and standard code and concepts well as well as maintain records as per organisation policies.	3

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NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
	<p>out tasks</p> <ul style="list-style-type: none"> • Demonstrate appropriate communication etiquette while working • Demonstrate active listening skills while interacting with others at work • Demonstrate responsible and disciplined behaviors 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 		
Responsibility	<p>The Individual needs to perform 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 	<p>Desludging Operator is responsible for his/ her own Work (within defined limits) which is to be performed under close supervision. They will be expected to conduct themselves in ways which show a basic understanding of the social environment and so be able to make a good contribution to team work.</p>	3

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NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
	<ul style="list-style-type: none">• Check that sludge vehicle is not leaking during the transit process• Check safe disposal of sludge at the disposal site• Carry out cleaning of sludge vacuum tank after disposal		

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SECTION 3

EVIDENCE OF NEED

26	What evidence is there that the qualification is needed? What is the estimated uptake of this qualification and what is the basis of this estimate?	
	Basis	In case of SSC
	Need of the qualification	<p>The SSC would undertake market study and would enclosed demand forecast for the proposed job role both on short-term and long-term basis to substantiate the requirement of the Qualification proposed. The SSC can produce the data from primary or authorized secondary sources as well.</p> <p>Skill Council for Green Jobs done Occupational Mapping and Skill Gap Analysis in the waste management sub-sectors. The qualification pack on Desludging Operator is needed to vocationalise the skills in desludging services which includes emptying, transport and disposal of faecal sludge at the identified sludge disposal sites.</p> <p>In India, most of the urban local bodies are not providing the desludging services. However, the private desludging operators are working informally and not following the health and safety norms. The QP needed in formalizing the desludging services market with proper health and safety standard.</p>
Industry Relevance	<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. (<i>The industry validation format to be used</i>)</p> <p>The qualification on Desludging Operator is of much relevance in managing the Faecal Sludge. As of now, the Indian cities do not have formal mechanisms of providing desludging of septic tank services. Most of the desludging operators exist in the cities are working informally and also not using proper health and safety measures consistently. Safe collection, handling and transport of fecal</p>	

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	<p>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 need to be desludged 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 Desludging Operator (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.</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>
Usage of the qualification	<p>The SSC would submit details of the employment generated (wherever applicable) and realised by virtue of training in the Qualifications of the sector earlier submitted for NSQF alignment.</p> <p>In case of unorganized sector, case studies or evidences may be given</p> <p>As per Ministry of Housing and Urban Affairs data, there are huge requirement of trained workers in Swachh Bharat Mission (phase 2).</p>
Estimated uptake	<p>The SSC would submit the estimated uptake of the qualification and What steps were carried out to test the likely uptake of the qualification? The basis of this estimate should include data about the</p>

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		<p>number of jobs or places in courses of learning which will be available to people who are awarded the qualification.</p> <p>Job estimates related to Desludging operation 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.</p>
27	<p>Recommendation from the concerned Line Ministry of the Government/Regulatory Body. To be supported by documentary evidences</p> <p>The present job role is aligned with the job roles required by Ministry of Housing and Urban Affairs</p>	
28	<p>What steps were taken to ensure that the qualification(s) does (do) not duplicate already existing or planned qualifications in the NSQF? Give justification for presenting a duplicate qualification</p> <p>Currently, Skill Council for Green Jobs is the only Sector Skill Council set up which has the mandate of Certification and Assessment of candidates undergoing Skill Development courses in waste management domain. NSDC list of Approved QPs was checked prior to commissioning the work. There is no overlap of these Qualification Packs with existing Qualification Packs.</p> <p>The NCO/2015 Classification was cross examined for existing trades, wherein no overlap / existing trade was found.</p> <ol style="list-style-type: none">1. Discussing the growth trajectory within each occupation after studying organisational charts of various industry players across small, medium and large-scale organizations.2. Exploring various lateral career opportunities for the discussed qualification3. Ensuring that there is a clear role up in terms of performance criteria qualification experience and skill requirement from lower NSQF Level to higher levels in the hierarchy. <p>Please refer to attached career path as per annexure II which clearly defines the career path.</p>	
29	<p>What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the</p>	

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<p>qualification(s) be revised or updated? Specify the review process here</p> <p>Monitoring of evaluation of assessments and Employer feedback will be sought post-placement, for monitoring and review of the Qualification</p> <p>Periodic review is scheduled after 3 years of NSQC approval</p>
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Please attach most relevant and recent documents giving further information about any of the topics above.

Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

Qualification Pack: Desludging Operator

SECTION 4

EVIDENCE OF PROGRESSION

30	<p>What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in this sector? Show the career map here to reflect the clear progression</p> <pre>graph TD; STT[Septic Tank Technician] --> SST[Supervisor-Septic Tank]; DO[Desludging Operator] --> SST; DO --> EFSM[Entrepreneur-Faecal Sludge Management]; DO --> SD[Supervisor-De-sludging]; SST --> MVO[Manager-Vacuum Truck Operation]; EFSM --> MVO; SD --> MVO; style STT fill:#90EE90; style DO fill:#90EE90; style SST fill:#FFFFFF; style EFSM fill:#FFFFFF,stroke-dasharray: 5 5; style SD fill:#FFFFFF; style MVO fill:#FFFFFF;</pre> <p>The diagram illustrates a career progression path. At the bottom level, there are two green boxes: 'Septic Tank Technician' and 'Desludging Operator'. From 'Septic Tank Technician', a red arrow points up to 'Supervisor-Septic Tank'. From 'Desludging Operator', red arrows point up to 'Supervisor-Septic Tank', 'Entrepreneur-Faecal Sludge Management' (a dashed box), and 'Supervisor-De-sludging'. From 'Supervisor-Septic Tank', a red arrow points up to 'Manager-Vacuum Truck Operation'. From 'Entrepreneur-Faecal Sludge Management', a red arrow points up to 'Manager-Vacuum Truck Operation'. From 'Supervisor-De-sludging', a red arrow points up to 'Manager-Vacuum Truck Operation'. The 'Manager-Vacuum Truck Operation' box is at the top level.</p>
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Annexure II: Career Map

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