NCVET Code
2022/ES/SCGJ/06730

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

Name and contact details of individual dealing with the submission

Name: Dr. Praveen Saxena

Position in the organisation: Chief Executive Officer

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List of documents submitted in support of the Qualifications File

1. Occupational Map
2. Model Curriculum

NSQF QUALIFICATION FILE
Approved in 20th NSQC Meeting, Dated: 30th June 2022
Rationalized in 24th NSQC Meeting – NCVET – Dated 17.11.2022

SUMMARY

1	**Qualification Title**	Animal Waste Manure Aggregator
2	**Qualification Code, if any**	SGJ/Q6302
3	**NCO code and occupation**	NCO-2015/6121.0300 Livestock Worker, General
4	**Nature and purpose of the qualification (Please specify whether qualification is short term or long term)**	Nature of Qualification Pack (QP): - Responsibility for own work and learning (Long term) Main purpose of the qualification: - Animal Waste Manure Aggregator is responsible for collection and aggregation of waste manure and supply at organic compost/vermi-compost, bio-gas units etc.
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**	Aggregator
9	**Job description of the occupation**	Animal Waste Manure Aggregator is responsible for collection and aggregation of waste manure from different sources and supply it as input material for preparation of organic compost/vermi-compost, bio-gas etc. **Elective 1:** Biogas Plant Operator: Animal Waste Manure Aggregator can further specialize in biogas plant operation and maintenance by acquiring the skills to become Biogas Plant Operator.

		Elective 2: Compost Plant Operator: Animal Waste Manure Aggregator can further specialize in compost plant operation and maintenance by acquiring the skills to become Compost Plant Operator.
10	**Licensing requirements**	N/A
11	**Statutory and Regulatory requirement of the relevant sector (documentary evidence to be provided)**	
12	**Level of the qualification in the NSQF**	3
13	**Anticipated volume of training/learning required to complete the qualification**	390 Hours (240 hours with 30 hours employability module + 90 OJT+ 60 hours of either elective)
14	**Indicative list of training tools required to deliver this qualification**	Moisture Analyzer, temperature sensor, Weighing Machine, Gloves (non-prickable), industrial mask, safety tools kit, sanitizer, first aid box, tasla/shallow pan, demo biogas plant/composting unit
15	**Entry requirements and/or recommendations and minimum age**	10th Pass Minimum Job entry age: 16 years
16	**Progression from the qualification (Please show Professional and academic progression)**	Animal Waste Manure Aggregator (Level 3) to Technician - Operations and Maintenance (Compressed Biogas/Waste to Energy) (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. •Propose to carry out RPL for candidates working in Clean cooking •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 09- 6121	
19	Date of planned review of the qualification.	29th June 2025	
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/N6308: Introduction to animal waste supply chain	15	3
(ii)	SGJ/N6308: Set-up drop points for collecting waste manure	45	3
(iii)	SGJ/N6309: Collect waste manure from designated areas	60	3
(iv)	SGJ/N6310: Storage and dispatch of waste manure	60	3
(v)	SGJ/N6205: Maintain basic health and workplace safety	30	3
(vi)	DGT/VSQ/N0101: Employability Skill	30	2
(vii)	On the Job Training	90	
	Sub Total (A)	330	

Elective components

	Title of component and identification code/NOSs/ Learning outcomes	Estimated size (learning hours)	Level
(i)	SGJ/N6311: Operation and maintenance of biogas plant	60	3
(ii)	SGJ/N6312: Operation and maintenance of compost plant	60	3

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Sub Total (B)	60+60	

Total Notional Hours (A+B)	**390 Hours (240 hours with 30 hours employability module + 90 OJT+ 60 hours of either elective)**	<u>**3**</u>

SECTION 1
ASSESSMENT

21	**Body/Bodies which will carry out assessment:** Skill Council for Green Jobs through its affiliated and 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 through affiliated Assessment Agency of SCGJ, 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.** This section includes the processes involved in identifying, gathering and interpreting information to evaluate the learner 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 • If the batch size is more than 30, then there should be 2 Assessors. 2. Testing Environment: Assessor must:

- 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 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 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

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 and are stored in the Hard Drives

24. Assessment evidences

Title of Component: Animal Waste Manure Aggregator

Sector Skill Council Green Jobs

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.

SECTION 2
25. EVIDENCE OF LEVEL

OPTION A

NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
Title/Name of qualification/component: Animal Waste Manure Aggregator **Level: 3**			
Process	The Animal Waste Manure Aggregator is responsible for the following processes: • Set-up drop points for collecting animal manure • Collect animal manure from designated areas • Storage and dispatch of waste manure • Maintain basic health and workplace safety Option 1: Biogas Plant Operator • Operation and maintenance of biogas plant Option 2: Compost Plant Operator • Operation and maintenance of compost plant	A professionally trained individual who will be responsible for carrying out a range of jobs in **familiar, predictable, routine situation of clear choice** and approach such as ensure continue availability of waste manure as feed for biogas plant and solving of any problems related to lack of stock in a period. The role qualifies as a Level 3 role, since it involves limited range of activities which are routine and predictable like **assessing the existing households, gaushala and other sources for collection of waste manure and choose quantity as per biogas plant/compost plant standard**.	3
Professional	Professionally trained individual would be able	The job holder is expected to exhibit an	3

Title/Name of qualification/component: Animal Waste Manure Aggregator Level: 3			
NSQF Domain	**Outcomes of the Qualification/Component**	**How the outcomes relates to the NSQF level descriptors**	**NSQF Level**
knowledge	to identify different targets & market to perform the aggregation & selling activity of the animal waste. S/He would able to evaluate the information obtained from biogas plant/compost plant regarding the demand and supply gap.	understanding of Basic facts, process and principle applied in **animal waste and its quality for production of biogas and various aggregation techniques and general safety**. For example, s/he is expected to know the various types of manure as milching and non milching cattle manure, poultry manure, pig manure , horse manure and other manure. S/he should also have the ability to speak read and write in the local vernacular language and English.	
Professional skill	The job holder is expected to manage relationships with individual household, gaushala and biogas or compost unit satisfying quality service delivery.	The job holder is expected to Recall and demonstrate practical skills, which are routine and repetitive in narrow range of application. For instance he/she should have **factual knowledge of waste manure aggregation techniques and on general safety**. Further, s/he is expected to know various types waste manure collection option viz., automated vehicle, manual cart etc., defining collection schedule and framing route map. S/he should also have the ability to speak	3

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NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
Title/Name of qualification/component: Animal Waste Manure Aggregator **Level: 3**			
		read and write in the local vernacular language and English. Since all the above-mentioned areas are related to factual knowledge in farm waste aggregation, the role qualifies for Level 3.	
Core skill	The individual is expected to exhibit effective communication skills by communicating clearly with the helpers and understanding the instructions given by the Supervisor at biogas plant/compost plant. Further, the individual is expected to perform respective record maintaining work and use basic arithmetic/ algebraic principles to identify common operational fault of animal waste manure collection, transport mechanism, and running biogas plant/compost plant.	The job holder is expected to exhibit effective oral communication skills (including awareness of vernacular language) so as to understand the instructions of the supervisor as well as clearly instruct helpers while carrying out day to day maintenance activities. The job holder is also expected to **possess reading and writing skills so as to read and understand equipment manuals of biogas/compost plant, health and safety instructions, various signage and standard code and concepts well as well as maintain records as per organisation policies**. The job holder is also expected to display basic arithmetic/ algebraic awareness.	3

Title/Name of qualification/component: Animal Waste Manure Aggregator Level: 3			
NSQF Domain	**Outcomes of the Qualification/Component**	**How the outcomes relates to the NSQF level descriptors**	**NSQF Level**
Responsibility	The individual is primarily responsible to gain knowledge about standard protocols and SOPs regarding collection, storage and delivery of waste manure. S/he is also expected to update self with the biogas operation, quality of waste manure and composting methodologies.	Animal Waste Manure Aggregator works under supervision but is also responsible for his/ her own work and learning to a large extent. S/he is expected to **update self with the standard protocols of biogas operation, composting and transportation safety**. S/he is also expected to have significant on the job learning about the equipment and their maintenance procedures. S/he works under some supervision but primarily carries out his/her day to day activities independently. Thus s/he can be placed at level 3.	3

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	Skill Council for Green Jobs done Occupational Mapping and Skill Gap Analysis in the waste management sub-sectors. A major growth driver for Skill Development in farm waste management is 'Animal Waste Manure Aggregator' which aligns with GOBAR-dhan scheme and Swatch Bharat Abhiyan of Ministry of Drinking Water and Sanitation, GoI and New National Biogas and Organic Manure Programme of Ministry of New and Renewable Energy, GoI. India has one of the largest livestock population in the world. As per the 19th livestock census (2012), the number of milch animals (cows and buffaloes) has increased from 77 million (livestock census 2007) to 81 million (livestock census 2012) showing a growth of 4.51% which also leads to increase in dung availability. The cattle dung generated is expected to reach 1623.39 million tons (MT) by 2020 and 2171.92 MT by 2030. The corresponding data for cattle dung recovery is estimated at 572.11 MT by 2020 and 1176.97 MT by 2030. There is no systematic or organized system of cattle manure collection, aggregation and its utilization for energy and compost production leading to poor disposal and creating health problems. Hence there is a need to collect and dispose this waste which has a potential of many job opportunities and entrepreneurship development.
Industry Relevance	Evidence of the qualification creation was supported by validations with representation from across sub sectors. The complete list of validating companies has been enclosed as an annexure to

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		the Q file.
	Usage of the qualification	As per the job projections it is expected that with increase with production of 3.75 million jobs by 2020 and 6.51 million jobs by 2030 will be generated.
	Estimated uptake	The projected job opportunities in animal waste are those related to cattle manure collection, aggregation and compost production. Estimated projections indicate there is a potential to generate 3.75 million jobs in animal waste manure aggregation which may increase to 6.51 million jobs by 2030 in the event that the demand is generated for cattle manure-based products such as compost. The job roles related to farm waste management sector were finalized in discussion with the industrial stakeholders and technical experts which are related to rural, agricultural, dairy and related areas. The job roles listed is a result of these comprehensive discussions and reflect the type of occupations that will be required in to realize the full potential of farm waste management sector.

27	**Recommendation from the concerned Line Ministry of the Government/Regulatory Body. To be supported by documentary evidences** The present job role is aligned with the job roles in the GOBAR-dhan scheme of Ministry of Jal Shakti, GoI
28	**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** 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 Clean cooking 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. The NCO/2015 Classification was cross examined for existing trades,

	wherein no overlap / existing trade was found.

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 qualification

3. 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.

Please refer to attached career path as per annexure II which clearly defines the career path. |
| **29** | **What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated? Specify the review process here**

Monitoring of evaluation of assessments and Employer feedback will be sought post-placement, for monitoring and review of the Qualification Pack. Periodic review is scheduled in May 2025 |

SECTION 4
EVIDENCE OF PROGRESSION

30	**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

Kindly refer Annexure II |

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.

Annexure II: Career Map

NSQF/Value chain		Biomass Supply Chain Management	
Level 8	GM-Operation		GM-Operation
Level 7	Plant Head - Operations CBG/WTE		Plant Head - Operations CBG/WTE
Level 6			Feedstock Manager (Procurement and Composition)
Level 5	Supervisor- Operations and Maintenance (Compressed Biogas/Waste to Energy)		Supervisor- Operations and Maintenance (Compressed Biogas/Waste to Energy) or Entrepreneur-Biomass Management
Level 4	Technician- O&M CBG/WTE		Biomass Depot Operator
Level 3		Animal Waste Manure Aggregator	Agri-Residue Aggregator
Level 2	Helper- WTE		