

## QUALIFICATION FILE

**Material Recovery Facility (MRF) Micro - Entrepreneur**

**Short Term Training (STT)**

**Future Skills**

**NCrF/NSQF Level: 4**

**Submitted By:**

**Skill Council for Green Jobs**

**Chief Executive Officer**

**3<sup>rd</sup> Floor, CBIP Building, Malcha Marg,**

**Chanakyapuri, New Delhi - 110021**

**Contact No. and Mail: 9871119101, [ceo@sscgi.in](mailto:ceo@sscgi.in)**

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Section 1: Basic Details

1.	<b>Qualification Name</b>	<b>Material Recovery Facility (MRF) Micro - Entrepreneur</b>											
2.	<b>Sector/s</b>	<b>Waste Management</b>											
3.	<b>Type of Qualification:</b> <input checked="" type="checkbox"/> New	<b>NQR Code &amp; version of existing/previous qualification:</b>		<b>Qualification Name of existing/previous version:</b>									
4.	<b>a. OEM Name</b> <b>b. Qualification Name</b> (Wherever applicable)												
5.	<b>National Qualification Register (NQR) Code &amp;Version</b>	QG-04-ES-00913-2023-V1-SCGJ & version 1		<b>6. NCrF/NSQF Level:</b> 4									
7.	<b>Award</b> <b>(Certificate/Diploma/Advance Diploma/ Any Other</b>	Certificate											
8.	<b>Brief Description of the Qualification</b>	Material Recovery Facility (MRF) Micro - Entrepreneur sets up a MRF unit for segregating collected waste in the form of paper, cardboard, plastic, metal, glass, etc. He/she collaborates with waste collectors, aggregators, recyclers, etc for buying and selling waste material. During the same, ensures compliance related to setting up the business, statutory compliance for running the business and other type of environmental compliance that are required in the sector. He/she is responsible for financial management, people management, networking, market analysis and overall maintenance and sustenance of the business.											
9.	<b>Eligibility Criteria for Entry for Student/Trainee/Learner/Employee</b>	<b>a. Entry Qualification &amp; Relevant Experience:</b> <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>1</td> <td>12th grade pass</td> <td>NA</td> </tr> <tr> <td>2</td> <td>Completed 2nd year of 3-year diploma (after 10th)</td> <td>NA</td> </tr> </tbody> </table>			S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	12th grade pass	NA	2	Completed 2nd year of 3-year diploma (after 10th)	NA
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)											
1	12th grade pass	NA											
2	Completed 2nd year of 3-year diploma (after 10th)	NA											

		<b>b. Age: 18 Years</b>	3	Pursuing 2nd year of 3-year regular Diploma (after 10th)				NA																						
			4	10th grade pass with two years of any combination of NTC/NAC/CITS or equivalent.				NA																						
			5	8th pass plus 2-year NTC plus 1-Year NAC plus 1-Year CITS				NA																						
			6	10th grade pass and pursuing continuous schooling				NA																						
			7	Previous relevant Qualification of NSQF Level 3.0				3 year relevant experience																						
<b>10.</b>	<b>Credits Assigned to this Qualification, Subject to Assessment</b> (as per National Credit Framework (NCrF))	14			<b>11. Common Cost Norm Category:</b> <b>I</b>																									
<b>12.</b>	<b>Any Licensing requirements for Undertaking Training on This Qualification</b> (wherever applicable)	NA																												
<b>13.</b>	<b>Training Duration by Modes of Training Delivery</b> (Specify <b>Total Duration</b> 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><b>Classroom (offline)</b></td> <td>75</td> <td>135</td> <td>120</td> <td></td> <td>90</td> <td>420</td> </tr> <tr> <td><b>Online</b></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)	<b>Classroom (offline)</b>	75	135	120		90	420	<b>Online</b>						
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Employability (Hours)	Total (Hours)																								
<b>Classroom (offline)</b>	75	135	120		90	420																								
<b>Online</b>																														
<b>14.</b>	<b>Aligned to NCO/ISCO Code/s</b> (if no code is available mention the same)	NCO-2015/1324.1201 Warehouse Supervisor																												
<b>15.</b>	<b>Progression path after attaining the qualification</b> (Please show	Vertical Progression: Waste Collection Entrepreneur																												

	Professional and Academic progression)	
16.	<b>Other Indian languages in which the Qualification &amp; Model Curriculum are being submitted</b>	Nil
17.	<b>Is similar Qualification(s) available on NQR-if yes, justification for this qualification</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
18.	<b>Is the Job Role Amenable to Persons with Disability</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <b>If “Yes”, specify applicable type of Disability:</b> <input checked="" type="checkbox"/> Deaf <input checked="" type="checkbox"/> Hard of Hearing <input checked="" type="checkbox"/> Acid Attack Victims <input checked="" type="checkbox"/> Dwarfism
19.	<b>How Participation of Women will be Encouraged</b>	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
20.	<b>Are Greening/ Environment Sustainability Aspects Covered</b> (Specify the NOS/Module which covers it)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
21.	<b>Is Qualification Suitable to be Offered in Schools/Colleges</b>	Schools <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    Colleges <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
22.	<b>Name and Contact Details of Submitting / Awarding Body SPOC</b> (In case of CS or MS, provide details of both Lead AB & Supporting ABs)	<b>Name:</b> Dr. Praveen Saxena <b>Email:</b> <a href="mailto:ceo@sscgi.in">ceo@sscgi.in</a> <b>Contact No.:</b> 9871119101 <b>Website:</b> <a href="https://sscgi.in/">https://sscgi.in/</a>

<b>23. Final Approval Date by NSQC:</b> <b>31.08.2023</b>	<b>24. Validity Duration:</b> 3 years	<b>25. Next Review Date: 30.08.2026</b>
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## Section 2: Module Summary

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core / Non-Core	NCrF /NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Pro j.	Viv a	Total	Weightage (%) (if applicable)
1.	Basic of waste management and market survey for the waste supply chain	SGJ/N4107: NOS Version No. 1.0	Core	4	1	10	20	120		30	31	19			50	20
2.	Set up and operation of Material Recovery Facility	SGJ/N4108 NOS Version No. 1.0	Core	4	3	30	60			90	32	18			50	20
3.	Assess various compliance with applicable statutory laws, policies and procedures in MRF	SGJ/N4109: NOS Version No. 1.0	Core	4	2	20	40			60	30	20			50	20
4.	Maintain Personal Health & Safety in Material Recovery facility	SGJ/N4110: NOS Version No. 1.0	Core	4	1	15	15			30	25	25			50	20
5.	Employability Skills	DGT/VSQ/N0103 NOS Version No. 1.0	Non-Core	5	3					90	20	30			50	20
	On the Job training				4			120		120						
	<b>Duration (in Hours) / Total Marks</b>			<b>4</b>	<b>14</b>	<b>75</b>	<b>135</b>	<b>120</b>		<b>420</b>	<b>138</b>	<b>112</b>			<b>250</b>	<b>100</b>

*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.

**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.	<b>Trainer's Qualification and experience in the relevant sector (in years)</b> (as per NCVET guidelines)	10th pass with 4 years of relevant experience Or Certified under relevant Craft Instructor Training Scheme (CITS) Course
2.	<b>Master Trainer's Qualification and experience in the relevant sector (in years)</b> (as per NCVET guidelines)	10th pass with 5 years of relevant experience Or Certified under relevant Craft Instructor Training Scheme (CITS) Course
3.	<b>Tools and Equipment Required for Training</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If "Yes", details to be provided in Annexure)
4.	<b>In Case of Revised Qualification, Details of Any Upskilling Required for Trainer</b>	Not Applicable

## Section 4: Assessment Related

1.	<b>Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)</b>	10th pass with 5 years of relevant experience Or Certified under relevant Craft Instructor Training Scheme (CITS) Course
2.	<b>Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)</b>	10th pass with 6 years of relevant experience Or Certified under relevant Craft Instructor Training Scheme (CITS) Course
3.	<b>Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)</b>	10th pass with 6 years of relevant experience Or Certified under relevant Craft Instructor Training Scheme (CITS) Course
4.	<b>Assessment Mode (Specify the assessment mode)</b>	Online and offline both
5.	<b>Tools and Equipment Required for Assessment</b>	<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.	<b>Latest Skill Gap Study (not older than 2 years) (Yes/No):</b> No published skills gap study is available across the plastic waste management value chain as this is relatively a new segment. However, a detailed gap analysis study was conducted by Indian Pollution Control Association (IPCA) in collaboration with SCGJ in 2022 where the gap in market for this qualification was identified.
2.	<b>Latest Market Research Reports or any other source (not older than 2 years) (Yes/No):</b> Yes available at  Yes, the following key documents are available in the public domain that establish the market requirement of MRFs and consequently MRF Entrepreneurs. a. Provision of setting up MRFs at ULB level: <a href="https://cpcb.nic.in/uploads/MSW/SWM_2016.pdf">https://cpcb.nic.in/uploads/MSW/SWM_2016.pdf</a> ; <a href="https://thc.nic.in/Central%20Governmental%20Rules/Plastic%20Waste%20Management%20Rules,%202016.pdf">https://thc.nic.in/Central%20Governmental%20Rules/Plastic%20Waste%20Management%20Rules,%202016.pdf</a> b. Provision of Extended Producers Responsibility in various Rules of Waste Management of India. The mandate of EPR can be fulfilled when particular

	<p>category of waste material is segregated and channeled. Hence, need for MRF entrepreneurs.  <a href="https://thc.nic.in/Central%20Governmental%20Rules/Plastic%20Waste%20Management%20Rules,%202016.pdf">https://thc.nic.in/Central%20Governmental%20Rules/Plastic%20Waste%20Management%20Rules,%202016.pdf</a> ;  <a href="https://cpcb.nic.in/uploads/plasticwaste/2-amendment-pwmrules-2022.pdf">https://cpcb.nic.in/uploads/plasticwaste/2-amendment-pwmrules-2022.pdf</a></p> <p>c. How MRFs are helpful in managing plastic waste: <a href="https://www.niti.gov.in/sites/default/files/2021-10/Final_Handbook_PWM_10112021.pdf">https://www.niti.gov.in/sites/default/files/2021-10/Final_Handbook_PWM_10112021.pdf</a>  d. The National Action Plan for Municipal Solid Waste Management, CPCB: <a href="https://cpcb.nic.in/uploads/MSW/Action_plan.pdf">https://cpcb.nic.in/uploads/MSW/Action_plan.pdf</a></p>
3.	<p>Government /Industry initiatives/ requirement (Yes/No): Yes</p> <p>It is estimated that only 22-28% of the waste is recovered and recycled in India. Lack of segregation of waste is one of the key factors responsible for this poor statistic. The government has recognized this issue and has laid emphasis on the development of Material Recovery Facilities (MRF) in India. The provision of setting up of MRF is present in several waste management rules including Solid Waste Management Rules, 2016 and Plastic Waste Management Rules, 2016. The MRFs mostly function as the secondary segregation units where dry waste is further segregation into various types. Many Urban Local Bodies are coming forward and supporting in setting up MRFs in their locality in PPP model. Increasingly, the ministries are also advising setting up of MRFs at village/ block level.</p> <p>With the setting up of MRFs, there will be a need to have trained professionals who can operate, manage and sustain the MRFs. MRF Entrepreneurs, once trained on the basics of waste management, machines, compliance, raw material quality, and other aspects that are part of this qualification will be able to add value to the waste and enhance the recovery of resources with minimum cost of operation and without compromising environment and social aspects. MRF entrepreneurs will also help recycling industries by supplying specific and quality raw material (currently, a lot of recycling industries are importing waste material since the local traders are not able to supply them raw material as per their specifications).</p>
4.	<p><b>Number of Industry validation provided:</b> Validations are being sought from up to 10 leading companies including recyclers, MRF Entrepreneurs, ULB officers, who are currently working on waste management projects.</p>
5.	<p><b>Estimated nos. of persons to be trained and employed:</b>  A study estimates that MRFs will help to generate employment of 40 Lakh person-days during construction of MRFs and ~80 Lakh person-days in perpetuity for operations &amp; maintenance of these facilities (MoHUA, 2021). The figures will only increase in future since the waste generation trend of India is on a rising front.</p>
6.	<p><b>Evidence of Concurrence/Consultation with Line Ministry/State Departments:</b>  Concurrence has been requested from the Ministry of Environment, Forest and Climate Change</p>

## Section 6: Annexure &amp; Supporting Documents Check List

*Specify Annexure Name / Supporting document file name*

1.	<b>Annexure:</b> NCrf/NSQF level justification based on NCrf level/NSQF descriptors <i>(Mandatory)</i>	<b>Annexure: Evidence of Level</b>
2.	<b>Annexure:</b> List of tools and equipment relevant for qualification <i>(Mandatory, except in case of online course)</i>	<b>Annexure: Tools and Equipment</b>
3.	<b>Annexure:</b> Detailed Assessment Criteria <i>(Mandatory)</i>	<b>Annexure: Assessment Strategy</b>
4.	<b>Annexure:</b> Assessment Strategy <i>(Mandatory)</i>	<b>Annexure: Assessment Strategy</b>
5.	<b>Annexure:</b> Blended Learning <i>(Mandatory, in case selected Mode of delivery is “Blended Learning”)</i>	<b>Annexure: Attached</b>
6.	<b>Annexure:</b> Multiple Entry-Exit Details <i>(Mandatory, in case qualification has multiple Entry-Exit)</i>	<b>NA</b>
7.	<b>Annexure:</b> Acronym and Glossary <i>(Optional)</i>	<b>Annexure: Attached</b>
8.	<b>Supporting Document:</b> Model Curriculum <i>(Mandatory – Public view)</i>	<b>Attached</b>

9.	<b>Supporting Document:</b> Career Progression ( <i>Mandatory - Public view</i> )	<b>NA</b>
10.	<b>Supporting Document:</b> Occupational Map ( <i>Mandatory</i> )	<b>Annexure: Attached</b>
11.	<b>Supporting Document:</b> Assessment SOP ( <i>Mandatory</i> )	<b>Annexure: Assessment Strategy</b>

## Annexure: Evidence of Level

Title/Name of qualification/component: Material Recovery Facility (MRF) Micro - Entrepreneur		Level: 4	
NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
Professional Theoretical Knowledge	Material Recovery Facility (MRF) Micro - Entrepreneur should have knowledge of: <ul style="list-style-type: none"> <li>• Types of waste generated; process of waste management; stakeholders involved</li> <li>• Applications of different types of waste</li> <li>• Technologies involved in sorting, baling and adding value to the waste</li> <li>• Identifying target markets and developing strategies to communicate with them</li> <li>• Accounting techniques and financial management</li> <li>• Technical specifications of various component of technologies</li> <li>• Compliances to be followed in operating the unit</li> </ul>	The entrepreneur is expected to exhibit an understanding of factual knowledge of waste, its stakeholders, technologies and compliances S/he should also have the ability to speak read and write in the local vernacular language or english to help a strong outreach with various customer groups across their areas of operation.	4
Professional and Technical Skills/ Expertise	The entrepreneur is expected to recall and demonstrate the professional skills like: <ul style="list-style-type: none"> <li>• Making appropriate decisions regarding the responsibilities of the job role</li> <li>• Looking out for opportunities to develop and grow the business</li> </ul>	The entrepreneur is expected to recall and demonstrate practical skills that require well developed skill, with clear choice of procedures in familiar context for trading value added segregated waste. He/she will be expected to understand what constitutes quality in the occupation and will distinguish between good and bad quality. At this level,	4

<b>Title/Name of qualification/component:</b> Material Recovery Facility (MRF) Micro - Entrepreneur		<b>Level: 4</b>	
<b>NSQF Domain</b>	<b>Key requirements of the job role</b>	<b>How the job role relates to the NSQF level descriptors</b>	<b>NSQF Level</b>
	<ul style="list-style-type: none"> <li>Networking with waste collectors, aggregators and recyclers for trading of waste</li> <li>Problem solving skills</li> <li>Completing tasks efficiently and accurately within stipulated timer</li> <li>Applying domain knowledge, observations and data to select course of action to perform tasks related to MRF</li> </ul>	they will be expected to carry out their work safely and securely and take full account of the health and safety of team/ workers.	
Employment Readiness & Technicianship Skills & Mind-set	Material Recovery Facility (MRF) Micro - Entrepreneur will be able to understand the supply chain of waste material. He/she will Identify different grade of waste material and will be well connected with waste workers' community and reach to the various sources of waste generation. He/she will have the experience of operation and maintenance of machines and equipment installed at the MRF. He/she will be able to make value addition to the waste by micro level segregation and effective packaging. He/she will ensure applicable statutory compliances. The Entrepreneur should have strong network with the aggregators / recyclers and good liaison with the ULBs and other stakeholders. He will be able to ensure health and safety at workplace	A Material Recovery Facility (MRF) Micro - Entrepreneur is a professionally trained individual who will be responsible for performing a range of functions in familiar, predictable and routine situations with the knowledge of waste management. Entrepreneurs will be responsible for carrying out a range of jobs, some of which will require them to make choices about the approaches they adopt including for assessing market conditions, preparing business plan to set up MRF unit, managing business operations of the unit etc. They will be expected to learn and improve their practice on the job.	4
Broad Learning Outcomes	At the end of the program, the learner will be able to: <ul style="list-style-type: none"> <li>Understand waste management and its process</li> </ul>	The entrepreneur is expected to possess the technical capabilities for preparing the raw material plan, business plan, set up a facility, etc., interact effectively with technician and other workers and employees, collect and	4

Title/Name of qualification/component: Material Recovery Facility (MRF) Micro - Entrepreneur		Level: 4	
NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
	<ul style="list-style-type: none"> <li>Carry out market analysis for raw material procurement and assess demand of waste material</li> <li>Identify waste collectors of the region who can supply waste</li> <li>Prepare a business plan for marketing various types of waste material</li> <li>Liaise with government authorities/local authorities, corporation etc. for smooth conduct of business operations</li> <li>Improve Entrepreneurship skills</li> <li>Acquire requisite infrastructure/land</li> <li>Set up and manage a Material Recovery Facility</li> <li>Manage human resource</li> <li>Ensure health and safety at workplace</li> </ul>	<p>organize information, understanding requirements of the local site to prepare solutions, etc. and communication skill for so as to interact effectively with the internal and external team. Thus, considering the core skills, s/he can be placed at Level 4.</p> <p>He/she 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.</p>	
Responsibility	<p>The Individual needs to perform the following task:</p> <ul style="list-style-type: none"> <li>Execution of economically sustainable business plan without compromising environment and social aspect</li> <li>Operating and maintaining the unit</li> <li>Ensure maximum recovery of recyclable with minimum cost</li> <li>Ensuring health and safety of others and self</li> </ul>	<p>Material Recovery Facility (MRF) Micro – Entrepreneur is responsible for his/ her own work and learning and also responsible to ensure the proper execution of certain tasks at Level 4.</p>	4



### 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	Checklist for plant inspection, designed model activities, HR policy document, samples of waste, model product report of facility, business registration documents, waste management policy document, list of compliances, model log books, financial management documents  Site Visit for Practical Learning; exposure to balers, forklift, conveyor belts, composting bins, and other machinery used at MRFs  Personnel Protective Equipment, First aid kit, Material Safety Data Sheet	Standard Make	

### Classroom Aids

The aids required to conduct sessions in the classroom are: Laptop, white board, Duster, marker, projector, charts, Training kit (Trainer guide, Presentations), Participant Handbook and Related Standard Operating Procedures.

## 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.	Ahuja Plastic Industry	Paramjeet Singh	Managing Director	Hadbast No.243, Tehsil Payal, Baba Shaheedan Road, Rajgarh, Ludhiana - 141421	8284000901	ahujaplastic@gmail.com	NA
2.	Conserve	Anita Ahuja	President	A 116, Madhuban Vikas Marg, Delhi - 110092	9999501200	anita@conserveindia.org	NA
3.	Harmony Overseas	Pankaj	Manager	G-255, G Block, Sector 63, Noida, Uttar Pradesh - 201301	9716162008	accounts@harmonyoverseas.com	NA
4.	Lifaffa	Shailendra Jha	Manager	1 <sup>st</sup> Floor, Building 7, Khullar Farms Road, New Delhi - 110030	9582570455	Shailendrajha1985@gmail.com	NA
5.	Plastiskul India	Kanika Ahuja	President	1 <sup>st</sup> Floor, Building 7, Khullar Farms Road, New Delhi - 110030	9999502002	Kanikaahuja27@gmail.com	NA
6.	Singla Plastic Industries	Hunny Singla	Partner	D-313, Focal Point, Patiala, 147004	9888394505	Ashksingla1959@gmail.com	NA
7.	SM International	Manoj Singh	Manager	Kh. 147, Panch Vihar Near Chipyana Fatak lal Kuan, Ghaziabad, U.P - 201009	955582280	Info9sminternational@gmail.com	NA

8.	Indian Pollution Control Association	Ashish Jain	Director	3-7, Shopping Complex, Hargovind Enclave, Vihar Marg Ext., Delhi - 110092	DDA 9312432405	info@ipcaworld.co.in	NA
9.							
10.							

## 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		60:40
2	<input checked="" type="checkbox"/> Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners		
3	<input checked="" type="checkbox"/> Showing Practical Demonstrations to the learners		
4	<input checked="" type="checkbox"/> Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training		
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		
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## 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: Basic of waste management and market survey for the waste supply chain	31	19		
Module 2: Set up and operation of Material Recovery Facility	32	18		
Module 3: Assess various compliance with applicable statutory laws, policies and procedures in MRF	30	20		
Module 4: Maintain Environment, Health & Safety at MRF unit	25	25		
Module 5: Employability Skills	20	30		
<b>Grand Total</b>	<b>138</b>	<b>112</b>		

## 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:

- 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

#### 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.

## 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
NSQF	National Skills Qualifications Framework
OJT	On the Job Training

## Glossary

Term	Description
<b>National Occupational Standards (NOS)</b>	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.
<b>Qualification</b>	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
<b>Qualification File</b>	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.
<b>Sector</b>	A grouping of professional activities on the basis of their main economic function, product, service or technology.

<b>Long Term Training</b>	Long-term skilling means any vocational training program undertaken for a year and above. <a href="https://ncvet.gov.in/sites/default/files/NCVET.pdf">https://ncvet.gov.in/sites/default/files/NCVET.pdf</a>
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Annexure: Annexure: Career Progression and OM

