

CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE

Directorate General of Training (DGT)
Government of India, Ministry of Skill Development and Entrepreneurship,
1st and 2nd Floor, CIRTES Building
Next to Pusa ITI, Pusa Campus
New Delhi - 110012

Name and address of submitting body:

Directorate General of Training (DGT)
Government of India, Ministry of Skill Development and Entrepreneurship,
1st and 2nd Floor, CIRTES Building
Next to Pusa ITI, Pusa Campus
New Delhi - 110012

Name and contact details of individual dealing with the submission

Name: Shri Deepankar Mallick

Position in the organisation: Deputy Director General (C & P)

Address if different from above:

Tel number(s): 011-25847035

E-mail address: deepankar.mallick60@nic.in

List of documents submitted in support of the Qualifications File

1. Competency-based curriculum (Annexure 1)
2. Advertisements of different organisations for posts relevant to NTC in the trade

Model Curriculum to be added which will include the following:

- **Indicative list of tools/equipment to conduct the training:** Enclosed with curricula
- **Trainers qualification:** Indicated in the curriculum
- **Lesson Plan:** All NCVT curricula are designed indicating specific practical to be carried out during training along with details of trade theory. Based on this the concerned instructor prepares the Lesson Plan with support of Reference Books and IMPs developed by DGT.
- **Distribution of training duration into theory/practical/OJT component:** Indicated in the curriculum.

SUMMARY

1	Qualification Title	'Health, Safety and Environment'		
2	Qualification Code, if any	DGT/1049		
3	NCO code and occupation	3257.0600 – Health, Safety and Environment Officer		
4	Nature and purpose of the qualification (Please specify whether qualification is short term or long term)	National Council for Vocational Training (NCVT) (long term qualification)		
5	Body/bodies which will award the qualification	National Council for Vocational Training (NCVT) affiliates the ITIs as per DGT guidelines issued from time to time.		
6	Body which will accredit providers to offer courses leading to the qualification	National Council for Vocational Training (NCVT)		
7	Whether accreditation/affiliation norms are already in place or not , if applicable (if yes, attach a copy)	Yes. The accreditation/ affiliation norms for all training providers are as per DGT guidelines issued from time to time with approval of NCVT.		
8	Occupation(s) to which the qualification gives access	Health, Safety and Environment has a wide scope of Employability ranging from self-employment, contractual employment to Industrial jobs. On successful completion of this course, the candidates shall be gainfully employed in the industries for following occupations: <ul style="list-style-type: none"> • Health, Safety and Environment Officer • Entrepreneur. 		
9	Job description of the occupation	Health, Safety and Environment applies theory and principles of environmental engineering and occupational health and safety at the work site to ensure a safe and healthy working environment, protect the environment that may be impacted by the work site and minimize business risk through the identification and elimination or minimization of environmental, health and safety risks.		
10	Licensing requirements	N/A		
11	Statutory and Regulatory requirement of the relevant sector (documentary evidence to be provided)	N/A		
12	Level of the qualification in the NSQF	Level 4		
13	Anticipated volume of training/learning required to	Sl. No.	Course Element	Notional Training

complete the qualification			Hours
	1.	Professional Skill (Trade Practical)	1320
	2.	Professional Knowledge (Trade Theory)	264
	3.	Employability Skills	110
	4.	Library & Extracurricular activities	66
	5.	Project Work	160
	6.	Revision & Examination	160
		Total	2080
14	Indicative list of training tools required to deliver this qualification	As per Annexure enclosed in the curriculum	
15	Entry requirements and/or recommendations and minimum age	a. Passed class 10 Examination under 10+2 system of Education. b. The minimum physical requirements are i. Height - 165 cm ii. Weight - 52 kg iii. Chest - Normal 81 cm - Expanded 85 cm iv. A registered MBBS doctor must certify that the candidate is medically fit to undertake the course.	
16	Progression from the qualification (Please show Professional and academic progression)	<ul style="list-style-type: none"> • Can join Apprenticeship programs in different types of industries leading to a National Apprenticeship certificate (NAC). • Can join Crafts Instructor Training Scheme (CITS) in the trade for becoming an instructor in ITIs. 	
17	Arrangements for the Recognition of Prior learning (RPL)	1. At present the students who have passed 10th class with minimum 3 years' experience in relevant field can appear for NCVT theory and practical semester examination directly. 2. The students who have passed SCVT examination in 'Health, Safety and Environment' trade can also appear for the NCVT Examination in the relevant semester and Trade directly.	
18	International comparability where known (research evidence to be provided)	1. Existence of any official document suggesting the comparability of the qualification with the qualifications in other countries is not known. 2. However, ITI passed out trainees are getting employment in many Gulf countries, European countries, Australia, New Zealand, Singapore etc.	

19	Date of planned review of the qualification.	March 2023	
20	Formal structure of the qualification		
	Mandatory components		
	Title of component and identification code/NOSs/Learning outcomes	Estimated size (learning hours)	Level
SPECIFIC LEARNING OUTCOMES			
Semester-I			
(i)	Apply safe working practices.	80	4
(ii)	Comply environment regulation and housekeeping	40	4
(iii)	Plan & prepare accident prone area and methods adopted for reducing accidents with safety.	40	4
(iv)	Identify and apply safety policy in an industry. List out the duties and implement Safety Targets, Objectives, Standards, Practices and Performances.	120	4
(v)	Plan, identify, marking and evaluate performance of display of explosives.	80	4
(vi)	Prepare profile with an appropriate accuracy as per safety precaution in workshop.	40	4
(vii)	Plan, select the construction site for visit and prepare the report.	80	4
(viii)	Plan, Select and implement safety and Health objectives and Targets, performance standards.	120	4
(ix)	Identify the various technique of fire and other hazards.	40	4
(x)	Identify, select and method of operation of fire extinguishers as per requirements.	40	4
(xi)	Plan and execute hose & hose fittings.	40	4
(xii)	Select and prepare the hydrant and pump system for proper application.	40	4
(xiii)	Identify; select respiratory personal protective devices and its maintenance.	80	4

NSQF QUALIFICATION FILE

Health, Safety and Environment

(xiv)	Identify the effect, its measurement of radiation and its control on human body.	40	4
Semester-II			
(xv)	Identify parameters governing the safety in construction and its impact in environment.	160	4
(xvi)	Identify the various technique of earthing fault protection.	40	4
(xvii)	Plan and apply the methods of plant design and housekeeping.	80	4
(xviii)	Verify and check of all industry Hazards in process of melting (Furnaces), Casing, and Forging.	80	4
(xix)	Identify Types of water relay management system.	120	4
(xx)	Clarify and execute the risk analysis exercise.	120	4
(xxi)	Select and use PPE, its care and maintenance.	80	4
(xxii)	Apply the method of bulk storage system of LPG/CNG.	40	4
(xxiii)	Prepare case study major Chemical Disasters.	160	4
Revision, Project work and Examination		320	4
Sub Total (A)		2080	4
Optional components		N/A (All components are compulsory)	
	Title of component and identification code/NOSs/ Learning outcomes	Estimated size (learning hours)	Level
	Sub Total (B)		

NSQF QUALIFICATION FILE

Health, Safety and Environment

<u>Total (A+B)</u>	<u>2080</u>	<u>4</u>
---------------------------	--------------------	-----------------

**SECTION 1
ASSESSMENT**

21	<p>Body/Bodies which will carry out assessment: National Council for Vocational Training (NCVT)</p>																				
22	<p>How will RPL assessment be managed and who will carry it out?</p> <ol style="list-style-type: none"> 1. At present the students who have passed 10th class with minimum 3 years' experience can appear for NCVT theory and practical semester examination directly. 2. The students who have passed SCVT examination in 'Health, Safety and Environment' trade can also appear for the NCVT Examination in the relevant semester and Trade directly. NCVT will carry out the assessment and State Directorates advertise in newspapers for informing the prospective candidates. 																				
23	<p>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.</p> <p>(1) Assessment process: The assessment for the semester-based qualification is carried out by conducting formative assessments, and end-of-semester examinations. The internal assessments for theory subjects and practical are conducted by the concerned instructors for evaluating the knowledge and skill acquired by trainees and the behavioural transformation of the trainees. This internal assessment is primarily carried out by collecting evidence of competence gained by the trainees by evaluating them at work based on assessment criteria, asking questions and initiating formative discussions to assess understanding and by evaluating records and reports, and sessional marks are awarded to them. Theory and practical examinations are conducted in Trade theory and Employability Skills. The question papers for the theory Examinations contain objective type questions. Trade practical examinations are conducted by the respective State Governments. However, the question papers for the Trade practical are prepared by NCVT.</p> <p>The marking pattern and distribution of marks for the qualification are as under:</p> <table border="1" data-bbox="312 1496 1401 2004"> <thead> <tr> <th colspan="3">Marking Pattern</th> </tr> <tr> <th>Sl. No.</th> <th>Subject for the trade test</th> <th>Maximum marks for the each subject</th> </tr> </thead> <tbody> <tr> <td>a)</td> <td>Practical</td> <td>100</td> </tr> <tr> <td>b)</td> <td>Trade Theory</td> <td rowspan="2">80 Objective type Written test of 80 marks (Trade Theory 30 marks & Employability Skills 50 marks)</td> </tr> <tr> <td>c)</td> <td>Employability Skills</td> </tr> <tr> <td>d)</td> <td>Internal assessment</td> <td>20</td> </tr> <tr> <td colspan="2">TOTAL:</td> <td>200</td> </tr> </tbody> </table> <p>(2) Minimum pass marks: The minimum pass percentage for practical is 60% & minimum pass</p>	Marking Pattern			Sl. No.	Subject for the trade test	Maximum marks for the each subject	a)	Practical	100	b)	Trade Theory	80 Objective type Written test of 80 marks (Trade Theory 30 marks & Employability Skills 50 marks)	c)	Employability Skills	d)	Internal assessment	20	TOTAL:		200
Marking Pattern																					
Sl. No.	Subject for the trade test	Maximum marks for the each subject																			
a)	Practical	100																			
b)	Trade Theory	80 Objective type Written test of 80 marks (Trade Theory 30 marks & Employability Skills 50 marks)																			
c)	Employability Skills																				
d)	Internal assessment	20																			
TOTAL:		200																			

percentage of theory subjects is 40%. For the purposes of determining the overall result, 50% weightage is applied to the result of each semester examination.

(3) Testing and certifications for the course:

- OMR sheet based question paper.
- A panel of expert paper setters, who are graduates in the concerned field with minimum 5-7 years experience, is prepared for setting question papers for the Trade. The panel is vetted by the Member Secretary, NCVT.
- Paper setters are appointed from the panel after the approval of the competent authority for setting the question paper.
- The question papers are then moderated by the Board of Moderation to see if the paper is set as per the requirement and syllabus.
- The manuscripts of the moderated question papers are sent to Government Printing Presses for printing.
- Printed question papers, packed in sealed covers, are despatched to Banks/Police Stations for keeping in safe custody.
- The question papers are handed over to the Chairman/Principal of the Testing Centre two hours before the commencement of the Examination.
- An Examination Board consisting of representatives of industry/Employer/State Government are set up to supervise and monitor the conduct of Examinations at every Centre.
- Theory and practical Examinations are carried out with invigilators/examiners with the overall supervision of the Examination Board.
- Examiners called for evaluation of practical should have minimum technical qualification of a Diploma in the respective engineering field. However, when diploma holders not available, the qualification is suitably relaxed.
- Examiners for practical Examinations are appointed preferably from Polytechnics/ Engineering colleges/ Industry of repute/ Government Departments or from amongst retired qualified personnel possessing requisite qualifications and sufficient experience in the trade/discipline.
- Each State Directorate prepares a panel of Examiners according to the norms as mentioned above and the Examiners are appointed from the panel.
- Flying squads from State Governments as well as the Central Government are constituted to check malpractices during the conduct of Examinations.
- OMR based answer sheets are evaluated by the third party evaluator only. Third party evaluator is selected for three years by open bidding process.
- Evaluation of every practical examination is carried out by the concerned examiner (from industry/ polytechnics) with the overall supervision of the Examination Board in a free and fair manner as per the assessment criteria.
- Till 2014, the marks were compiled by the State Governments as per NCVT guidelines and the results were declared by the State Governments. At present, the marks are compiled by NCVT on its portal www.ncvtmis.gov.in and the results are declared by the State Governments.
- The successful trainees are awarded National Trade Certificates.

Overall assessment strategy:

Assessment of the qualification evaluates trainees to show that they can integrate knowledge, skills and values for carrying out relevant tasks as per the defined assessable

outcomes and assessment criteria. The trainees may choose the preferred language for assessment. The underlying principle of assessment is fairness and transparency. While assessing the trainee, assessor is directed to assess as per the defined assessment criteria against the assessable outcomes. The evidence of the competence acquired by the trainees can be obtained by conducting theory and practical examinations, observing the trainees at work, asking questions and initiating formative discussions to assess understanding and evaluating records and reports. The ultimate objective of the assessment is to assess the candidates as per the defined assessment criteria for the assessable/ learning outcomes.

Specific Arrangements for assessment:

- Assessment is outcome-based.
- There are formative and summative assessments in Theory and Practical.
- Assessment is carried out in Trade theory, Trade Practical and Employability Skills.
- While Trade Theory and Trade Practical are used for assessing Trade-related jobs and Employability skills is used to test the communication and language skills of the trainee.
- In addition to demonstration of theory and practical knowledge, trainees get a chance to present total personality.

Quality assurance activities:

- Question papers are set by external paper setters
- Evaluation of Theory Examinations is done by third-part agency. Third party evaluator is selected for three years by open bidding process.
- Trade Practical is examined by External Examiner (as explained above).

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.

ASSESSMENT EVIDENCE**Means of assessment 1**

Assessment will be evidence based comprising the following:

- Job carried out in labs/workshop
- Record book/ daily diary
- Answer sheet of assessment
- Viva-voce
- Progress chart
- Attendance and punctuality
- Assignment
- Project work

Means of assessment 2

Add boxes as required.

Pass/Fail

The minimum pass percentage is 40% for each Theory Examination and 25% for each part/section of the Examination separately, and 60% marks for each Trade practical Examination.

Complete a grid for each component as listed in “Formal structure of the qualification” in the Summary.

NOTE: this grid can be replaced by any part of the qualification documentation which shows the same information – i.e. Learning Outcomes to be assessed, assessment criteria and the means of assessment.

24. Assessment evidences

Title of Component: Health, Safety and Environment

GENERIC LEARNING/ ASSESSABLE OUTCOME:

Outcomes to be assessed/NOSs to be assessed	Assessment criteria for the outcome
1. Apply safe working practices	1.1 Follow and maintain procedures to achieve a safe working environment in line with occupational health and safety regulations and requirements, and according to policy. 1.2 Recognize and report all unsafe situations according to policy. 1.3 Identify and take necessary precautions on fire and safety hazards and report according to work policy and procedures. 1.4 Identify, handle and store/ dispose-off dangerous goods and substances according to policy and procedures following safety regulations and requirements. 1.5 Identify and observe policies and procedures with regard to illness or accident. 1.6 Identify safety alarms accurately. 1.7 Report supervisor/ competent of authority in the event of accident or sickness of any staff and record accident details correctly according to accident/injury procedures. 1.8 Identify and observe evacuation procedures according to site policy. 1.9 Identify Personal Productive Equipment (PPE) and use the same as per related working environment. 1.10 Identify basic first-aid and use them under different circumstances. 1.11 Identify different fire extinguisher and use the same as per requirement.
2. Comply with environment regulation and housekeeping	2.1 Identify environmental pollution & contribute to the avoidance of instances of environmental pollution. 2.2 Deploy environmental protection legislation & regulations. 2.3 Take opportunities to use energy and materials in an environmentally friendly manner. 2.4 Avoid waste and dispose waste as per procedure.
3. Assist in exigencies and carry out elementary first-aid during emergencies.	3.1 Demonstrate elementary first-aids. 3.2 Demonstrate safety practices to be observed in kitchen. 3.3 Demonstrate use of personal protective dresses. 3.4 Identify emergency exit route. 3.5 Demonstrate fire fighting procedure using fire

	extinguishers.
4. Work in a team, understand and practice soft skills, technical English to communicate with required clarity.	4.1 Obtain sources of information and recognize information. 4.2 Use documents, regulations and occupationally related provisions. 4.3 Conduct appropriate and target oriented discussions with higher authority and within the team. 4.4 Present facts and circumstances, possible solutions & use English and French terminology. 4.5 Resolve disputes within the team. 4.6 Conduct written communication.
5. Explain energy conservation, global warming, pollution, and contribute in day- to-day work by using available resources optimally.	5.1 Semester examination to test knowledge on energy conservation, global warming and pollution. 5.2 Their applications will be assessed during execution of assessable outcome.
6. Explain personnel finance, entrepreneurship and manage/organize related task in day-to- day work for personal & societal growth.	6.1 Semester examination to test knowledge on personnel finance, entrepreneurship. 6.2 Their applications will be assessed during execution of assessable outcome.

Specific Assessable Outcome:

LEARNING / ASSESSABLE OUTCOME	ASSESSMENT CRITERIA
SEMESTER-I	
7. Plan & prepare accident prone area and methods adopted for reducing accidents with safety.	7.1 Identify the various accident prone areas. 7.2 Demonstrate the safety belt helmets, gloves and Goggles, uses it. 7.3 Identify and apply Accident prevention techniques. 7.4 Use Safety belt helmet gloves, and goggles.
8. Identify and apply safety policy in an industry. List out the duties and implement Safety Targets, Objectives, Standards, Practices and Performances.	8.1 Carry out the plant safety inspection with the help of check list 8.2 Visit to industrial unit and review of prevailing safety Practices. 8.3 Observe prevailing safety provision, their condition, welfare measures include medical facilities, crèches and religious places. 8.4 Awareness about various compensations and Documentation.
9. Plan, identify, marking and evaluate performance of	9.1 Display of explosives, their identification and marking as per explosives act.

display of explosives.	9.2 Hands on experience with Hand and power tools.
	9.3 Measurement of Heat, Illumination and Noise Demonstration.
	9.4 Determination of related electrical experiments.
10. Prepare profile with an appropriate accuracy as per safety precaution in workshop.	10.1 Identify various processes during production and safety
	10.2 Witness construction and safety precaution observed.
11. Plan, select the construction site for visit and prepare the report.	11.1 Practices of good Housekeeping and Study of egress and safe access.
	11.2 Identify causes of accident during material handling.
	11.3 Pitching of ladders, proper use of safety belt and preparation of work permit.
12. Plan, Select and implement safety and Health objectives and Targets, performance standards.	12.1 Develop a workplace Safety and Health Policy.
	12.2 Plan safety and Health objectives and Targets, performance standards.
	12.3 Implementation and Operation Structure and responsibilities, individual responsibilities, Safety Consultation.
	12.4 Awareness and competence.
	12.5 Communication- Information coming into the organization.
13. Identify the various technique of fire and other hazards.	13.1 General causes and classification of fire, Detection of fire, extinguishing methods, fire fighting installations with and without water.
	13.2 Machine guards and its types, automation.
	13.3 High pressure hazards, safety, emptying, inspecting, repairing, hydraulic and non-destructive testing, hazards and control in mines.
14. Identify, select and method of operation of fire extinguishers as per requirements.	14.1 Identify Training Objectives and Methods, Deliver Training
	14.2 Access to Specialist advice and Services.
	14.3 Relationships within the organization, relationships outside the organization, external specialist safety and safety support.
15. Plan and execute hose & hose fittings.	15.1 Perform hose drill.
	15.2 Hose pick up.
	15.3 Hose laying.

	15.4 Hose joining.
	15.5 Hose replacement at different position.
16. Select and prepare the hydrant and pump system for proper application.	16.1 Identify Appropriate Action
	16.2 Risk assessment records and control.
	16.3 Familiarization and demonstration of Hydrant and its associated equipments.
	16.4 Practical pump operation, fault finding of primer failure, method of ladder pitching & climbing Application of Arm Hold and Leg Lock.
17. Identify; select respiratory personal protective devices and its maintenance.	17.1 Stages in plant life and unsafe condition in factories.
	17.2 Maintenance & safety, basics safety programming, safety department, Rules and regulation of safety department.
	17.3 Responsibility of management for safety in plant, safeguarding the public.
	17.4 Responsibility of government, Social organization and public authorities.
18. Identify the effect, its measurement of radiation and its control on human body.	18.1 Types and effects of radiation on human body, Measurement and detection of radiation intensity.
	18.2 Effects of radiation on human body, Measurement – disposal of radioactive waste, Control of radiation.
	18.3 Industrial noise -Sources, and its control, Effects of noise on the auditory system and health, Measurement of noise.
	18.4 Vibration - effects, measurement and control measures, Industrial Hygiene.
SEMESTER-II	
19. Identify parameters governing the safety in construction and its impact in environment.	19.1 Scope and Importance; need for public awareness about our environment.
	19.2 Economic and social security; Environment impact of transportation.
	19.3 Global warming and greenhouse effect, urbanization, acid rain.
	19.4 Demonstration of health and environment effect through chart.
	19.5 Environmental pollution – causes, Effects and control measures of air pollution, water pollution, soil pollution.
20. Identify the various technique of earthing fault	20.1 Safe limits of amperages, voltages, distance from lines, etc., Joints and connections, Overload and Short circuit

protection.	protection.
	20.2 Earthing standards and earth fault protection, Protection against voltage.
	20.3 Criteria in their selection, installation, maintenance.
	20.4 Borrowed neutrals, Electrical equipment in hazardous atmosphere.
21. Plan and apply the methods of plant design and housekeeping	21.1 Plant layout, design and safe distance, Ventilation and heat stress, Significance of ventilation, Natural ventilation.
	21.2 Mechanical ventilation Air conditioning.
	21.3 Safety and good housekeeping, Disposal of scrap and other trade wastes.
	21.4 Spillage prevention, Use of colour as an aid of housekeeping, cleaning methods.
	21.5 Inspection and Checklists, Advantages of good houses.
22. Verify and check of all industry Hazards in process of melting (Furnaces), Casing, and Forging.	22.1 Demonstration of prevailing condition in industry about Drinking Water Sanitary & Washing, Cloakrooms.
	22.2 Identify Facilities for Food & Drink Shelters & Living Accommodation.
	22.3 Disaster management floods, earth quake, cyclone, and slides.
	22.4 Identify role of individual in prevention of pollution
23. Identify Types of water relay management system	23.1 Maintenance of ladders and trolleys.
	23.2 Design of turntable ladders, water tender and special equipment.
	23.3 Identify Types of water relay system.
	23.4 Arrangements of water relay system.
24. Clarify and execute the risk analysis exercise.	24.1 Definition: Incident, accident, injury, dangerous occurrences, unsafe acts, unsafe conditions, hazards, error, oversight, mistakes, etc.
	24.2 Accident Prevention: Theories / Models of accident occurrences, Principles of accident prevention.
	24.3 Accident and Financial implications, Hazard identification and analysis, fault tree analysis, Job safety analysis, examples, Plant safety inspection objectives and types check procedure inspection.
25. Select and use PPE, its care and maintenance.	25.1 Personal Protective Equipments: Need, selection, supply, use, care and maintenance, Personal protective devices for head, ear, face, eye, foot, knee and body protection,

	Respiratory personal protective devices.
	25.2 Cardiac massage, poisoning, wounds.
	25.3 Personal Protective Equipments: Need, selection, supply, use, care and maintenance, Personal protective devices for head, ear, face, eye, foot, knee and body protection, Respiratory personal protective devices.
26. Apply the method of bulk storage system of LPG/CNG	26.1 Identify General Consideration Types of Storage,
	26.2 Layout of storages with specific reference to LPG, CNG, Chlorine, Ammonia
27. Prepare case study major Chemical Disasters.	27.1 Preparation of Case study of Major Chemical Disasters
	27.2 Introduction to Occupational Health Hazards
	27.3 Dangerous Properties of Chemicals, Dust, Gases, Fumes, Mist, Vapours, Smoke and Aerosols,

NSQF QUALIFICATION FILE

Health, Safety and Environment

SECTION 2

25. EVIDENCE OF LEVEL

OPTION A

Title/Name of qualification/component: Health, Safety and Environment		Level: 4	
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
Process	<p>Familiar, Predictable, Routine Situations of Clear Choice</p> <ul style="list-style-type: none"> • Plan & prepare accident prone area and methods adopted for reducing accidents with safety. • Plan, Select and implement safety and Health objectives and Targets, performance standards. • Identify the various technique of fire and other hazards. • Identify the effect, its measurement of radiation and its control on human body. • Identify parameters governing the safety in construction and its impact in environment. • Clarify and execute the risk analysis exercise. • Select and use PPE, its care and maintenance. • Apply safe working practices. • Comply with environment regulation and 	<p>In all the learning outcomes for example 'Plan & prepare accident prone area and methods adopted for reducing accidents with safety.' and 'Plan, Select and implement safety and Health objectives and Targets, performance standards.', the learner will be required to choose appropriate tools, equipments, Procedures as per the requirement of the job. The work will however be done within a familiar, predictable and routine range of situations to achieve the tolerance levels and accuracy demanded as per the job.</p> <p>Thus the learner requires to demonstrate ability to work in familiar, predictable, routine, situation of clear choice.</p> <p>And the NSQF level as per this descriptor will be 4.</p>	4

NSQF QUALIFICATION FILE

Health, Safety and Environment

Title/Name of qualification/component: Health, Safety and Environment			Level: 4
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
Professional knowledge	<p>housekeeping.</p> <p>Knowledge of facts in a field of work or study</p> <ul style="list-style-type: none"> • Introduction to Hazard, Causes, Identification, Evaluation & Control of Hazard. • Definition of Risk, Risk Analysis • Definition of Accidents, Classification of Accidents • Preparation & assessment of safety audit • Introduction to Safety Management • FACTORIES ACT 1948 (Amended) • General Provision, Drinking Water, Sanitary & Washing • Safety and Protection of existing environment • Social security legislation • MISCELLANEOUS ACTS & RULES • Basic Physics and Chemistry related to Fire • Anatomy of Fire • Classification of Fire & Extinguishers • Hose & pumps, water tender • Radiation and Industrial Hazards • Basic philosophy of safety • Electrical safety 	<p>The learner will need to be well versed with Factual knowledge of field of Fire types and industrial safety for example 'Introduction to Hazard, Causes, Identification, Evaluation & Control of Hazard.', 'Definition of Accidents, Classification of Accidents' and 'Safety and Protection of existing environment.'</p> <p>Hence NSQF Level is 4 for this descriptor.</p>	4

NSQF QUALIFICATION FILE

Health, Safety and Environment

Title/Name of qualification/component: Health, Safety and Environment			Level: 4
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
	<ul style="list-style-type: none"> Excavations, demolitions & structural frames Safety in melting, boilers Precautions in processes Safety in the engineering industry Personal protective equipment Occupational hazards & dangerous chemicals 		
Professional skill	<ul style="list-style-type: none"> Identify and apply safety policy in an industry. List out the duties and implement Safety Targets, Objectives, Standards, Practices and Performances. Plan, select the construction site for visit and prepare the report. Identify, select and method of operation of fire extinguishers as per requirements. Identify, select respiratory personal protective devices and its maintenance. Identify the various technique of earthing fault protection. Identify Types of water relay management system. Apply the method of bulk storage system of LPG/CNG. Assist in exigencies and carry out elementary 	<p>The learner after the trainer will be able to work independently and recall and demonstrate practical skill, routine and repetitive in narrow range of application, using appropriate rule and tool as per the job given to them. This can be ascertained by reading the Assessment Criteria.</p> <p>The learner will also be responsible for own quality of work and will have to use quality tools to check own work to ensure conformance to requirements of the job.</p> <p>Hence NSQF Level is 4 for this descriptor.</p>	4

NSQF QUALIFICATION FILE

Health, Safety and Environment

Title/Name of qualification/component: Health, Safety and Environment		Level: 4	
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
	<p>first-aid during emergencies.</p> <ul style="list-style-type: none"> Work in a team, understand and practice soft skills, technical English to communicate with required clarity. 		
Core skill	<p>Language to communicate written or oral, with required clarity</p> <ul style="list-style-type: none"> Obtain sources of information and recognize information. Use and draw up technical drawings and documents. Use documents and technical regulations and occupationally related provisions. Conduct appropriate and target oriented discussions with higher authority and within the team. Present facts and circumstances, possible solutions & use English special terminology. Resolve disputes within the team Conduct written communication. <p>Desired Mathematical Skills</p> <ul style="list-style-type: none"> Demonstrate basic mathematical concept and principles to perform practical operations. 	<p>The work of Health, Safety and Environment involves Service, Repair & Installation of PV Panels and their maintenance which requires competence in written language with required clarity in order to understand the work enlisted in the job card/service card.</p> <p>The learner will also need to communicate with team supervisor to understand the job and explain ones work which requires competence in oral language, with required clarity.</p> <p>The learner will also need to have basic understanding of social political and natural environment as mentioned in the learning outcome for example 'Comply environment regulation and housekeeping'</p> <p>Hence NSQF Level is 4 for this descriptor</p>	4

NSQF QUALIFICATION FILE

Health, Safety and Environment

Title/Name of qualification/component: Health, Safety and Environment			Level: 4
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
	<ul style="list-style-type: none"> Basic skills in Arithmetic, Algebra, Trigonometry and statistics and apply knowledge of specific area to perform practical operations. <p>Basic understanding of social political and natural environment</p> <ul style="list-style-type: none"> Understand and explain the concept in productivity, quality tools, and labour welfare legislation and apply such in day to day work to improve productivity & quality. Explain energy conservation, global warming and pollution and contribute in day to day work by optimally using available resources. Explain entrepreneurship and manage/organize related task in day to day work for personal & societal growth. Comply environment regulation and housekeeping. Identify environmental pollution & contribute to the avoidance of instances of environmental pollution. Deploy environmental protection legislation & regulations Take opportunities to use energy and materials in an environmentally friendly manner Avoid waste and dispose waste as per 		

NSQF QUALIFICATION FILE

Health, Safety and Environment

Title/Name of qualification/component: Health, Safety and Environment			Level: 4
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
	<p>procedure</p> <ul style="list-style-type: none"> Recognize different components of 5S and apply the same in the working environment. 		
Responsibility	<ul style="list-style-type: none"> Plan, identify, marking and evaluate performance of display of explosives. Prepare profile with an appropriate accuracy as per safety precaution in workshop. Plan and execute hose & hose fittings. Select and prepare the hydrant and pump system for proper application. Plan and apply the methods of plant design and housekeeping. Verify and check of all industry Hazards in process of melting (Furnaces), Casing, and Forging. Prepare case study major Chemical Disasters. Explain energy conservation, global warming and pollution and contribute in day-to- day work by optimally using available resources. Explain personnel finance, entrepreneurship and manage/organize related task in day-to- day work for personal & societal growth. 	<p>The Health Safety & Environment personnel has to perform all the learning outcomes independently and as per requirements of the job, hence is responsible for own work and learning.</p> <p>Hence NSQF Level is 4 for this descriptor.</p>	4

NSQF QUALIFICATION FILE*Health, Safety and Environment***OPTION B**

Title/Name of qualification/component: Health, Safety and Environment			Level: 4
NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
Process			
Professional knowledge			
Professional skill			
Core skill			
Responsibility			

SECTION 3

EVIDENCE OF NEED

26	<p>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?</p> <table border="1" data-bbox="339 472 1209 1420"> <thead> <tr> <th data-bbox="339 472 627 613">Basis</th> <th data-bbox="627 472 1209 613">In case of other Awarding Bodies (Institutes under Central Ministries and states departments)</th> </tr> </thead> <tbody> <tr> <td data-bbox="339 613 627 779">Need of the qualification</td> <td data-bbox="627 613 1209 779">The proposed qualification is running in the system for last few decades and passed out candidates are engaged in various related industries.</td> </tr> <tr> <td data-bbox="339 779 627 1099">Industry Relevance</td> <td data-bbox="627 779 1209 1099">The job role defined for the qualification is as per the National Qualification of Occupation 2015 which is developed by Employment Directorate under the ministry of Labour and Employment in collaboration with different industry partners and as per ILO guidelines. This justifies the qualification is very much relevance for industry.</td> </tr> <tr> <td data-bbox="339 1099 627 1265">Usage of the qualification</td> <td data-bbox="627 1099 1209 1265">The Proposed qualification is running in ITI system across the country successfully over the period of time.</td> </tr> <tr> <td data-bbox="339 1265 627 1420">Estimated uptake</td> <td data-bbox="627 1265 1209 1420">This is a New Trade. The present seating capacity is approximately 260.</td> </tr> </tbody> </table>	Basis	In case of other Awarding Bodies (Institutes under Central Ministries and states departments)	Need of the qualification	The proposed qualification is running in the system for last few decades and passed out candidates are engaged in various related industries.	Industry Relevance	The job role defined for the qualification is as per the National Qualification of Occupation 2015 which is developed by Employment Directorate under the ministry of Labour and Employment in collaboration with different industry partners and as per ILO guidelines. This justifies the qualification is very much relevance for industry.	Usage of the qualification	The Proposed qualification is running in ITI system across the country successfully over the period of time.	Estimated uptake	This is a New Trade. The present seating capacity is approximately 260.
Basis	In case of other Awarding Bodies (Institutes under Central Ministries and states departments)										
Need of the qualification	The proposed qualification is running in the system for last few decades and passed out candidates are engaged in various related industries.										
Industry Relevance	The job role defined for the qualification is as per the National Qualification of Occupation 2015 which is developed by Employment Directorate under the ministry of Labour and Employment in collaboration with different industry partners and as per ILO guidelines. This justifies the qualification is very much relevance for industry.										
Usage of the qualification	The Proposed qualification is running in ITI system across the country successfully over the period of time.										
Estimated uptake	This is a New Trade. The present seating capacity is approximately 260.										
27	<p>Recommendation from the concerned Line Ministry of the Government/Regulatory Body. To be supported by documentary evidences.</p> <p>This qualification is run by Ministry of Skill Development and Entrepreneurship and different industries under the related line ministry are also generally consulted before finalizing the curricula.</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>The qualification is originally designed and approved by NCVT for the Craftsmen Training Scheme and is in existence for the last 30 years. NCVT has been entrusted with the responsibilities of prescribing standards and curricula for craftsmen training, advising the Government of India on the overall policy and programmes, conducting All India Trade</p>										

	Tests and awarding National Trade Certificates.
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 qualification(s) be revised or updated? Specify the review process here</p> <ul style="list-style-type: none"> • Mentor Council (MC) for the Safety and Security Sector was formed in 2014 to review the curriculum of this qualification under the sector. • CSTARI, the research wing of DGT, reviews and updates the qualification, in consultation with industries and other stakeholders, on a regular basis by conducting trade committee meetings. • DGT will keep on doing continuous comparative study in the trade by referring to relevant upcoming qualifications in the National Qualifications Register (NQR) and relevant sectors.

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.

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> <ul style="list-style-type: none"> • Qualifying trainee will obtain an NCVT Certificate in Health, Safety and Environment trade which gives the following options of progression to the trainee: <ol style="list-style-type: none"> i) National Apprenticeship Certificate will be designed in due course of time as this a new trade. ii) Entrepreneur.
-----------	---

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.