NATIONAL COMPETENCY STANDARDS
FOR
OPERATOR (HYDRO POWER PLANT)

Department of Occupational Standards
Ministry of Labour and Human Resources
Thimphu, Bhutan.

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FOREWORD

The Department of Occupational Standards of the Ministry of Labour and Human Resources proudly presents National Competency Standards (NCSs) for Operator (Hydro Power Plant) as part of TVET reform initiative for improving the quality of Vocational Education and Training System in Bhutan. The standards represent the fruits of hard work and invaluable experiences gained by the department since its establishment in the latter half of 2003. The main aim of developing Competency Standards is to set up a well defined nationally recognized Vocational Qualification and Certification system that will help set a benchmark for the Technical Vocational Education and Training (TVET) System in our country aligned to international best practices.

Competency Standards is one of the base pillars in the Bhutan Vocational Qualification Framework (BVQF) and is the first step in its implementation. The standards are developed to ensure that employees or vocational graduates possess and acquire the desired skills, knowledge and attitude required by industries and employers. In order to ensure this close match in supply and demand of skills, knowledge and attitude, standards have been developed in close consultation and partnership with industry experts and validated by the Technical Advisory Committees for the concerned economic sectors.

A vocational education and training system based on Competency Standards shall ensure that delivered training is of a high quality and relevant to the needs of the labour market. As a result, future TVET graduates will be better equipped to meet the need and expectations of industries and employers. This positive impact on the employability of TVET graduates will enhance the reputation of vocational education and training and make it attractive to school leavers.

While acknowledging the existing level of cooperation and collaboration, the ministry earnestly requests employers and training providers to extend the fullest support and cooperation in implementing the National Competency Standards. The ultimate objective is to build a competent and productive national workforce that will contribute to the continued socio-economic progress of our country.

I gratefully acknowledge the valuable contributions made by experts from industries during the consultation, verification and validation processes of the standards. I look forward to improved engagement and active participation of the industry and employers in the development of a quality assured demand driven TVET system in the near future.

Director
Department of Occupational Standards
Ministry of Labour and Human Resources

INTRODUCTION

A. National Competency Standards (NCS)

Competency Standards specify the skill, knowledge and attitudes applied to a particular occupation. Standards also specify the standards or criteria of performance of a competent worker and the various contexts in which work may take place. Standards provide explicit advice to assessors regarding the skill and knowledge to be demonstrated by candidates seeking formal recognition either following training or through work experience.

Purpose of National Competency Standards

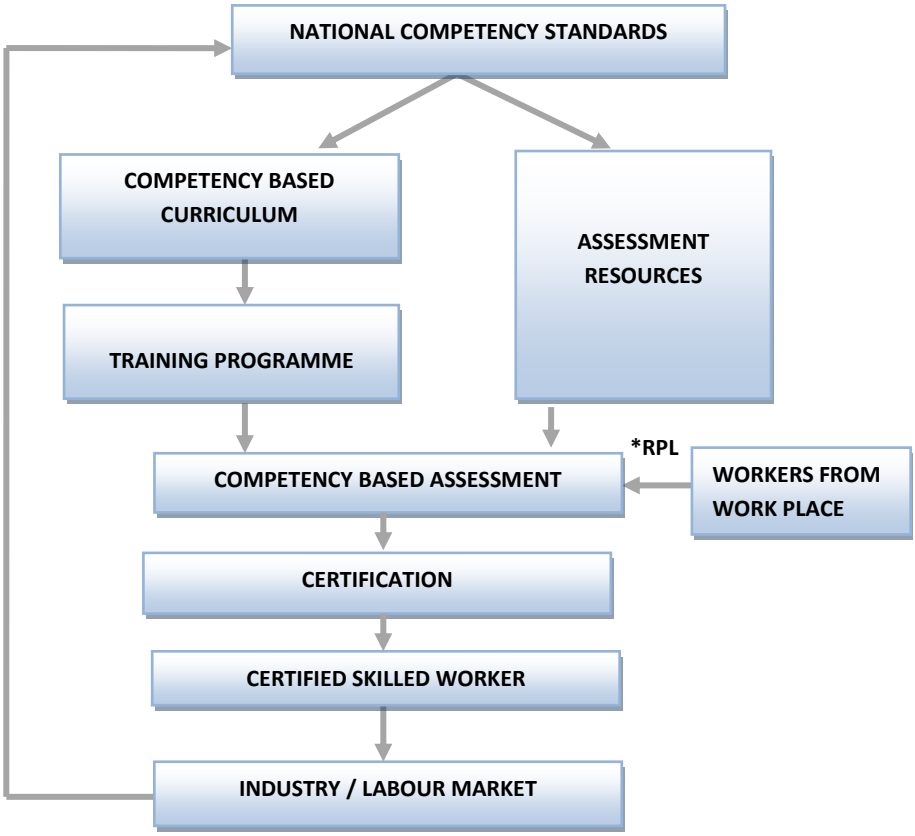
National Competency Standards serve a number of purposes including:

- Providing advice to curriculum developers about the skill and knowledge to be included in curriculum.
- Providing specifications to assessment resource developers about the skill, knowledge and attitudes within an occupation to be demonstrated by candidates.
- Providing advice to industry/employers about job functions, which in turn can be used for the development of job descriptions, performance appraisal systems and work flow analysis.

B. Bhutan Vocational Qualification Framework (BVQF)

Bhutan Vocational Qualifications Framework is an agreed system of Assessing, Certifying and Monitoring nationally recognized qualifications for all learning in the TVET sector against national standards, in training institutions, in the workplace, in schools or anywhere where learning takes place.

Components of the Bhutan Vocational Qualification Framework (BVQF)



*** RPL = Recognition of Prior Learning**

BVQF Levels

The Bhutan Vocational Qualification Framework has three levels classified based on the competency of the skilled workers. The three levels are:

- National Certificate Level 3 (NC III)
- National Certificate Level 2 (NC II)
- National Certificate Level 1 (NC I)

BVQF Level Descriptors

The qualification levels are decided based on level descriptors. The detail of the qualification level descriptor is as follows:

National Certificate Level 1

Carry out processes that:	Learning demand:	Responsibilities which are applied:
• Are narrow in range. • Are established and familiar. • Offer a clear choice of routine responses. • Involve some prioritizing of tasks from known solutions.	• Basic operational knowledge and skill. • Utilization of basic available information. • Known solutions to familiar problems. • Little generation of new ideas.	• In directed activity. • Under general supervision and quality control. • With some responsibility for quantity and quality. • With no responsibility for guiding others.

National Certificate Level 2

Carry out processes that:	Learning demand:	Responsibilities which are applied:
• Require a range of well developed skills. • Offer a significant choice of procedures requiring prioritization. • Are employed within a range of familiar context.	• Some relevant theoretical knowledge. • Interpretation of available information. • Discretion and judgments. • A range of known responses to familiar problems	• In directed activity with some autonomy. • Under general supervision and quality checking. • With significant responsibility for the quantity and quality of output. • With some possible responsibility for the output of others.

National Certificate Level 3

Carry out processes that:	Learning demand:	Responsibilities which are applied:
• Requires a wide range of technical or scholastic skills. • Offer a considerable choice of procedures requiring prioritization to achieve optimum outcomes. • Are employed in a variety of familiar and unfamiliar contexts.	• A broad knowledge base which incorporates some theoretical concepts. • Analytical interpretation of information. • Informed judgment. • A range of sometimes innovative responses to concrete but often unfamiliar problems.	• In self–directed activity. • Under broad guidance and evaluation. • With complete responsibility for quantity and quality of output. • With possible responsibility for the output of others.

PURPOSE

This suite of two qualifications is designed for people interested in a career as Operator (Hydro Power Plant).

The first of the qualifications is the National Certificate in Operator (Hydro Power Plant) Level 2. The qualification comprises six unit titles that cover the essential knowledge and skills required for Operator (Hydro Power Plant).

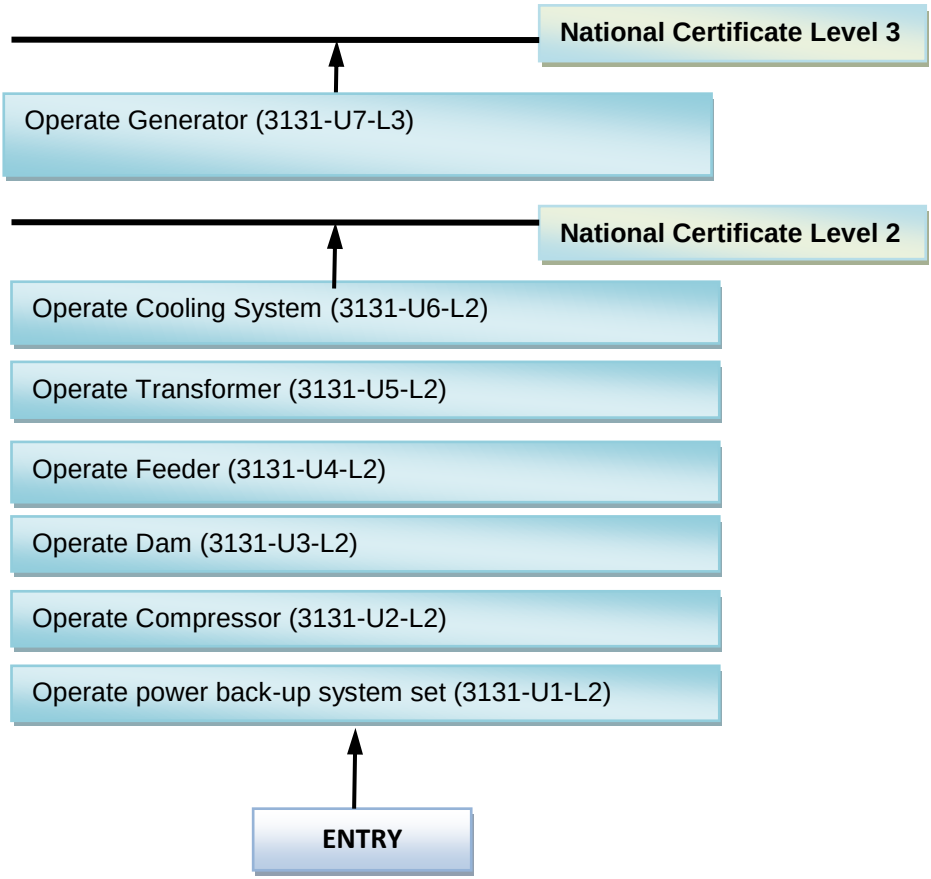
The Level 2 qualification recognizes the skills and knowledge required for people working as a skilled Operator (hydro power plant) and builds on the skills and knowledge that candidates will have gained through the successful completion of the Level 1 certificate, if any. This qualification prepares people for entry into the National Certificate Level 3.

The qualification level 3 includes one unit title that cover the knowledge and skills needed to operate generator.

The National Certificate in Operator (Hydro Power Plant) Level 3 is currently the final achievement in this qualification pathway. Candidates wishing to be admitted into training will already hold the National Certificate Level 2. The Level 3 qualification recognizes the competencies required to work as a highly skilled Operator (Hydro Power Plant).

A diagram of the qualification pathway provided by these three National Certificates follows.

PACKAGING OF QUALIFICATION FOR OPERATOR
(HYDRO POWER PLANT)



CODING USED FOR COMPETENCY STANDARDS

The coding and classification system developed in Bhutan is logical, easy to use, and also aligned with international best practises. The Bhutanese coding and classification system is based on the International Standard Classification of Occupations, 2008 (ISCO-08) developed by the International Labour Organisation (ILO).

The coding of the National Competency Standards forms the basis of the identification code for the Vocational Education and Training Management Information System (VET – MIS) both in terms of economic sector identification and that of the individual standard.

Coding the individual unit of Competency Standard

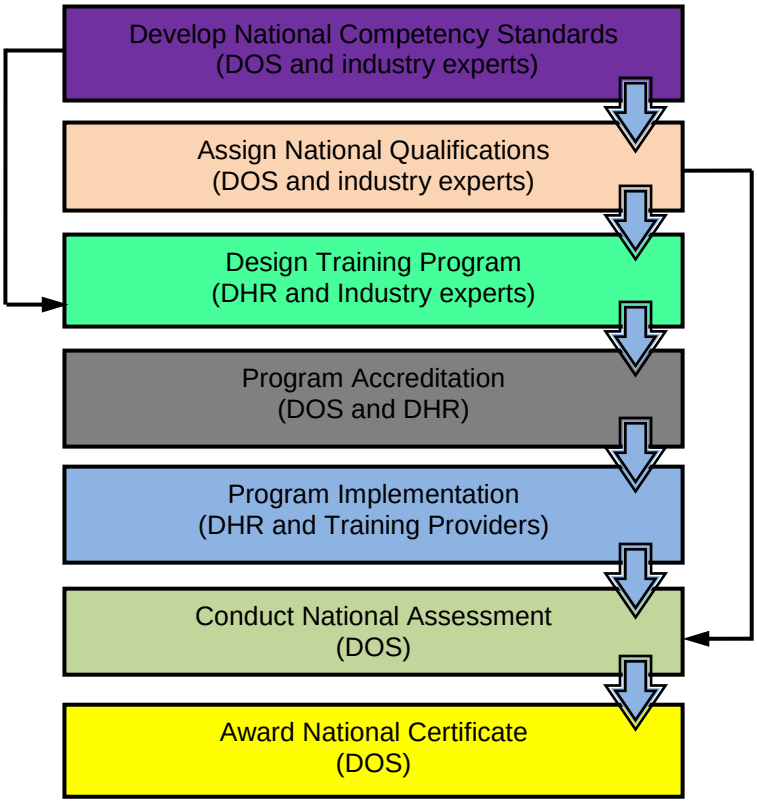
Coding the individual units of Competency Standard has a multiple purpose:

- to identify the level,
- to identify to which qualification level the standard belongs,

A job can include a number of competencies described in the Competency Standards.

To illustrate with an example, the ILO assigns the code 3131 to the occupation Power production plant operator. Therefore, in the Bhutan's context, the occupation Operator (Hydro Power Plant) has been assigned the code 3131 in the National Coding System. The first unit is assigned the code U1, the first Unit of National Competency Standard is designated the code 3131 U1. Levels are assigned the code L and follow a logical progression from the National Certificate Level 1 (NC I) to the National Certificate Level 3 (NC III). Therefore the National Certificate Level 3 is assigned the code L3.

Implementation and operational procedures for Competency Standards (CS)



Key:
MoLHR – Ministry of Labour and Human Resources
DHR – Department of Human Resources
DOS – Department of Occupational Standards

NATIONAL COMPETENCY STANDARDS FOR OPERATOR (HYDRO POWER PLANT)

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Date of Review : 08/05.2014

Technical Advisory Committee (TAC) members for the Power Sector involved in the validation:

National Competency Standard was validated by the Operation and maintenance division/unit heads

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16. Jigme Tshewang, Operator, Chukha Hydro Power Plant.
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		generator	

UNIT TITLE : **Operate power back up system set**

DESCRIPTOR : This unit covers the competencies required to operate diesel generator and battery bank following safety measures at workplaces.

CODE : 3131-U1-L2

ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA	
1. Prepare for work	1.1	Identify and use required Personal Protective Equipment (PPE) as per the job requirement.
	1.2	Identify and use required materials as per the job requirement.
	1.3	Select and use required tools and equipments as per the job requirement
2. Operate Diesel Generator	2.1	Check and maintain level of oil and lubricants to the required level as per the specification
	2.2	Check and measure specific gravity and Acid level of battery and take necessary actions as per the standard practices
	2.3	Check and set selector switch to required position if necessary as per the job requirement
	2.4	Conduct test run and take necessary action as per the standard practices
	2.5	Record the readings as per the establishment procedures
3. Operate Battery bank	3.1	Check battery connections and take necessary actions as per the job requirement
	3.2	Check and maintain battery voltage, bus voltage, current, to required level as per specification and take necessary actions as per the standard practices
	3.3	Record readings and enter into system as per the establishment procedures

	3.4	Check and ensure DC supply and take necessary actions as per the standard practices

RANGE STATEMENT
Materials may include but not limited to: • Log book • pen

ASSESSMENT GUIDE
Methods of Assessment • The candidate shall have access to all required tools, equipment, materials and documents • Evidence of performance shall be based on practical demonstration • Knowledge can be assessed through diagrams, in writing or orally (viva-voce) • The candidate must complete the assessment in industry accepted time frame **Context for Assessment** • Competency may be assessed in the actual workplace or in a simulated workplace setting **Critical aspect** • Demonstrate compliance with safety regulations applicable to work site operations • Check and maintain battery voltage, bus voltage, current to required level as per specification and take necessary actions as per the standard practices

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
• Drawings and specifications • Occupational Health and Safety (OHS) Regulation • First Aid • Types and uses of personal protective equipments. • Manufacturer's operation manual. • Positive work values • Basic literacy and numeracy • Operations of DG set • Ratings • Voltage	• Proper use of tools and equipment • Team work • Communication skills • Planning • Time management • Problem solving • Judgment and decision making • Operation and control

UNIT TITLE : **Operate compressor**

DESCRIPTOR : This unit covers the competencies required to operate compressor as per the standard procedures following safety measures.

CODE : 3131-U2-L2

ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
1. Prepare for work	1.1 Identify and use required ***Personal Protective Equipment (PPE)*** as per the job requirement. 1.2 Identify and use required materials as per the job requirement. 1.3 Select and use required tools and equipments as per the job requirement.
2. Operate compressor	2.1 Check and ensure pressure to the required level as per the specification 2.2 Release moisture from the tank as per the standard practices 2.3 Check the condition of belt and take necessary action as per the standard practices 2.4 Detect the evidence of ***problem***(abnormal sound, vibration, leakages) and take necessary action as per the standard practices 2.5 Participate to conduct test run for proper functioning as per the standard procedures 2.6 Record the readings as per the standard practices

RANGE STATEMENT
PPE may include but not limited to: • Helmet • Safety shoes • Working dress • Hand gloves

ASSESSMENT GUIDE
Methods of Assessment • The candidate shall have access to all required tools, equipment, materials and documents • Evidence of performance shall be based on practical demonstration • Knowledge can be assessed through diagrams, in writing or orally (viva-voce) • The candidate must complete the assessment in industry accepted time frame **Context for Assessment** • Competency may be assessed in the actual workplace or in a simulated workplace setting **Critical aspect** • Demonstrate compliance with safety regulations applicable to work site operations • Check and ensure pressure to the required level as per the specifications

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
• Occupational Health and Safety (OHS) Regulation • First Aid • Types and uses of personal protective equipments. • Manufacturer's operation manual. • Positive work values • Basic literacy and numeracy • Types of compressor • Operating procedures of compressor • Basic electrical	• Proper use of tools and equipment • Team work • Communication skills • Planning • Time management • Problem solving • Judgment and decision making • Operation and control

UNIT TITLE : **Operate Dam**

DESCRIPTOR : This unit covers the competencies required to operate dam being able to participate in dam scoring works following standard practices

CODE : 3131-U3-L2

ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
1. Prepare for work	1.1 Identify and use required Personal Protective Equipment (PPE) as per the job requirement. 1.2 Identify and use required materials as per the job requirement. 1.3 Select and use required tools and equipment as per the job requirement
2. Participate in Dam scoring works	2.1 Adjust the water level to the required level as per the job requirement 2.2 Check for air suction and take necessary actions as per the standard procedures 2.3 Close the gates to fill the dam to the required level as per job requirement 2.4 Open the required gates to flush out silt deposits as per the job requirement 2.5 Participate in silt analysis as per the job requirement 2.6 Check for seepage and take necessary action as per the standard practices 2.7 Record the readings as per the job requirement
3. Perform Routine checks of Dam	3.1 Check the water level of the dam as per the standard procedures 3.2 Check and ensure the gate position as per the

		standard practices
	3.3	Check the oil level of DG set and take necessary actions as per the standard practices
	3.4	Check the ***conditions of water*** and take necessary actions as per the standard practices
	3.5	Check the condition of trash rack cleaning machine and take necessary action as per the job requirement
	3.6	Check the condition of lighting system and take necessary actions as per the standard practices
	3.7	Record readings and enter into system as per the job requirement

RANGE STATEMENT
Condition of water may include but not limited to: • Colour • Debris

ASSESSMENT GUIDE

Methods of Assessment

- The candidate shall have access to all required tools, equipment, materials and documents
- Evidence of performance shall be based on practical demonstration
- Knowledge can be assessed through diagrams, in writing or orally (viva-voce)
- The candidate must complete the assessment in industry accepted time frame

Context for Assessment

- Competency may be assessed in the actual workplace or in a simulated workplace setting

Critical aspect

- Demonstrate compliance with safety regulations applicable to work site operations
- Adjust the water level to the required level as per the job requirement
- Check for air suction and take necessary actions as per the standard procedures

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
• Occupational Health and Safety (OHS) Regulation • First Aid • Types and uses of personal protective equipments. • Manufacturer's operation manual. • Positive work values • Basic literacy and numeracy • Types of dams • Types of gates	• Proper use of tools and equipment • Team work • Communication skills • Planning • Time management • Problem solving • Judgment and decision making • Operation and control

UNIT TITLE : **Operate Feeder**

DESCRIPTOR : This unit covers the competencies required to operate feeder and being able to shut down feeder effectively following standard practices

CODE : 3131-U4-L2

ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA	
1. Prepare for work	1.1	Identify and use required ***Personal Protective Equipment (PPE)*** as per the job requirement.
	1.2	Identify and use required materials as per the job requirement.
	1.3	Select and use required tools and equipments as per the job requirement
2. Perform Shut down of feeder	2.1	Obtain approval from concern authority as per establishment procedures
	2.2	Open breaker as per the standard procedures
	2.3	Operate switch to open bus and line isolator as per the standard procedures
	2.4	Close line earth switch as per standard procedures
	2.5	Ensure same shutdown of feeder procedures are followed at both the ends(sending and Receiving) in sequence as per the standard practices
	2.6	Issue work permit as per the establishment procedures
	2.7	Normalize the feeder following standard procedures
3. Routine feeder	3.1	Check the status of feeders as per standard

checks		procedures
	3.2	Check air/gas pressure and take necessary actions as per the standard practices
	3.3	Check compressor and breaker pressures and take necessary actions as per the standard practices
	3.4	Check for leakages and take necessary actions as per the standard procedures
	3.5	Record the ***readings*** and punch into the system as per the establishment requirement.

RANGE STATEMENT	
PPE may include but not limited to:	
• Gloves	• Safety boot
• Helmet	• Rain coat
Readings may include:	
• Energy meter	• Powers
• Voltage	• Cable oil pressure

ASSESSMENT GUIDE

Methods of Assessment

- The candidate shall have access to all required tools, equipment, materials and documents
- Evidence of performance shall be based on practical demonstration
- Knowledge can be assessed through diagrams, in writing or orally (viva-voce)
- The candidate must complete the assessment in industry accepted time frame

Context for Assessment

- Competency may be assessed in the actual workplace or in a simulated workplace setting

Critical aspect

- Demonstrate compliance with safety regulations applicable to work site operations
- Ensure same shutdown of feeder procedures are followed at both the ends(sending and Receiving) in sequence as per the standard practices

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
• Occupational Health and Safety (OHS) Regulation • First Aid • Drawings and specifications • Types and uses of personal protective equipments. • Manufacturer's operation manual. • Positive work values • Basic literacy and numeracy • Basic electrical • Types of feeders and breakers • Ratings • Shutdown procedures • Types of shutdown	• Proper use of tools and equipment • Team work • Communication skills • Planning • Time management • Problem solving • Judgment and decision making • Operation and control

UNIT TITLE : **Operate Transformer**

DESCRIPTOR : This unit covers the competencies required to operate all ranges of transformer in the hydro power plant following safety precautions

CODE : 3131-U5-L2

ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA	
1. Prepare for work	1.1	Identify and use required ***Personal Protective Equipment (PPE)*** as per the job requirement.
	1.2	Identify and use required materials as per the job requirement.
	1.3	Select and use required ***tools and equipments*** as per the job requirement
2. Operate transformer	2.1	Check and monitor conservator oil tank level and inform to the concern personnel as per the job requirement
	2.2	Check and monitor oil/winding temperature to required value and take necessary actions as per the standard practices
	2.3	Check transformer body ***physically*** as per the standard practices
	2.4	Drain transformer cooler and take necessary actions as per the standard practices
	2.5	Check butterfly valve for ***circulation*** and take necessary actions as per the standard procedures
	2.6	Check flow meter and take necessary actions as per the standard practices
	2.7	Check for leakages and take corrective measures as per the job requirement
	2.8	Check colour of silica gel and inform to the concern person as per the establishment procedures

3. Perform Routine checks of transformer	3.1 Compile and punch data records in SAP (system Application Product, ERPs) as per the job requirement 3.2 Check for ***defects*** and take necessary actions as per the standard practices 3.3 Check flow meter, pressure gauge and take necessary actions as per the standard practices

RANGE STATEMENT	
Physical checks may include but not limited to:	
• Hand touch • Abnormal sound	•
Tools and equipments may include but not limited to:	
• Hammer • Plier • Screw driver	• Wrench set • Touch
Circulation includes:	
• Oil circulation • Water circulation	
Defects may include but not limited to:	
• Leakages • Abnormal sound	• Spark

ASSESSMENT GUIDE

Methods of Assessment

- The candidate shall have access to all required tools, equipment, materials and documents
- Evidence of performance shall be based on practical demonstration
- Knowledge can be assessed through diagrams, in writing or orally (viva-voce)
- The candidate must complete the assessment in industry accepted time frame

Context for Assessment

- Competency may be assessed in the actual workplace or in a simulated workplace setting

Critical aspect

- Demonstrate compliance with safety regulations applicable to work site operations
- Check butterfly valve for circulation and take necessary actions as per the standard procedures

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
• Occupational Health and Safety (OHS) Regulation • First Aid • Types and uses of personal protective equipments. • Manufacturer's operation manual. • Positive work values • Basic literacy and numeracy • Types of transformer • Transformer rating • Basic electrical	• Proper use of tools and equipment • Team work • Communication skills • Planning • Time management • Problem solving • Judgment and decision making • Operation and control • Coordination

UNIT TITLE : **Operate Cooling system**

DESCRIPTOR : This unit covers the competencies required to operate cooling systems and pump effectively following standard procedures and practices

CODE : 3131-U6-L2

ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA	
1. Prepare for work	1.1	Identify and use required ***Personal Protective Equipment (PPE)*** as per the job requirement.
	1.2	Identify and use required materials as per the job requirement.
	1.3	Select and use required ***tools and equipments*** as per the job requirement
2. Operate cooling system	2.1	Normalize oil circulating pump (OCP) as per the standard practices.
	2.2	Open generator and transformer MOV(motor Operating Valve) as per the standard practices
	2.3	Lubricate cooling bearings and shafts as per the standard practices
	2.4	Normalize cooling water pump (CWP) as per the standard practices
	2.5	Check and monitor cooling water pressure(CWP) and take necessary actions as per the job requirement
	2.6	Check water pressure before and after strainer and take actions if required, as per the standard practices
	2.7	Check non return valve(NRV) and flow meter and take necessary actions as per the standard practices
	2.8	Check emergency water tank level and take necessary actions if required, as per the job requirement

3. Perform Routine checks of cooling system	3.1	Check for ***physical check*** and take necessary actions as per the standard practices
	3.2	Check oil level gauge and take necessary actions as per the standard practices
	3.3	Enter pump data to the required format as per the job requirement
	3.4	Record pressure readings as per the establishment procedures

RANGE STATEMENT	
Tools and equipment may include but not limited to:	
• Wire brush	• Wrench
• Hammer	• Lever
Physical checks may include but not limited to:	
• Hand touching	• Cables
• Pump	

ASSESSMENT GUIDE
Methods of Assessment • The candidate shall have access to all required tools, equipment, materials and documents • Evidence of performance shall be based on practical demonstration • Knowledge can be assessed through diagrams, in writing or orally (viva-voce) • The candidate must complete the assessment in industry accepted time frame **Context for Assessment** • Competency may be assessed in the actual workplace or in a simulated workplace setting **Critical aspect** • Demonstrate compliance with safety regulations applicable to work site operations • Check water pressure before and after strainer and take actions if required, as per the standard practices

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
• Occupational Health and Safety (OHS) Regulation • First Aid • Types and uses of personal protective equipments. • Manufacturer's operation manual. • Positive work values • Basic literacy and numeracy • LPM (Littre per minute)	• Proper use of tools and equipment • Team work • Communication skills • Planning • Time management • Problem solving • Judgment and decision making • Operation and control

requirement for units • Working principles of cooling system • Pump capacity	• Coordination

UNIT TITLE : **Operate Generator**

DESCRIPTOR : This unit covers the competencies required to operate generator effectively following safety at workplace

CODE : 3131-U7-L3

ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA	
1. Prepare for work	1.1	Select and use ***personal protective equipments (PPE)*** as per the job requirement.
	1.2	Select and use required materials as per the job requirement.
	1.3	Select and use required tools and equipments as per the job requirement.
2. Operate generator	2.1	Obtain approval for operation from competent authority as per the establishment procedures
	2.2	Unlock main inlet valve (MIV) as per the standard practices
	2.3	Check for break release and take necessary actions as per the standard practices
	2.4	Open unit earth switch as per the standard practices
	2.5	Normalize cooling system as per the standard operating procedures
	2.6	Re-set relay /pre- start as per the standard procedures
	2.7	Check pre-start check indications and give generator mode command as per the standard operating procedures
	2.8	Check the conditions of main inlet valve (closing and Opening) as per the standard practices
	2.9	Start and stop high pressure lubricating pump as per the standard practices

	2.10	Check unit ready to start indications and give start pulse command as per the standard procedures
	2.11	Monitor generator RPM (rotation per minute) as per the specifications
	2.12	Close bus isolator as per the standard operating procedures
	2.13	Close field breakers/excitation as per the standard procedures
	2.14	Set generator voltage to the required value as per the specifications
	2.15	Synchronize generator with grid as per the standard operating procedures
	2.16	Set generator load as per the river in flow following standard practices
	2.17	Regulate voltage and powers as per the standard practices
	2.18	Calculate water discharge as per the standard practices
	2.19	Check the status of ***relays (master tripping relays, emergency relay, negative phase sequence relays, bus tripping relay)*** and take necessary actions as per the standard practices
3. Perform routine checks of generators	3.1	Check temperature and take necessary actions as per the standard practices
	3.2	Check lamp indications(close and open) and take necessary action as per the standard practices
	3.3	Check voltage and powers as per the standard practices
	3.4	Check leakages and take necessary actions as per the standard practices
	3.5	Check pressures and take necessary actions as per the standard practices
	3.6	Check ***detectors*** and take necessary actions as

		per the standard practices
	3.7	Check flow meters and take necessary actions as per the standard practices
	3.8	Compile and punch data records in SAP (system Application Product, ERPs) as per the job requirement

RANGE STATEMENT

PPE may include but not limited to:

- Ear Muff
- Mask
- Working dress
  Safety boot

Detectors may include but not limited to:

- Fire
- Smoke

ASSESSMENT GUIDE

Methods of Assessment

- The candidate shall have access to all required tools, equipment, materials and documents
- Evidence of performance shall be based on practical demonstration
- Knowledge can be assessed through diagrams, in writing or orally (viva-voce)
- The candidate must complete the assessment in industry accepted time frame

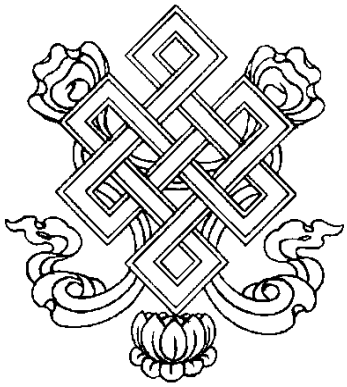
Context for Assessment

- Competency may be assessed in the actual workplace or in a simulated workplace setting

Critical aspect

- Demonstrate compliance with safety regulations applicable to work site operations
- Operate generator effectively as per the standard practices

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
• Occupational Health and Safety (OHS) Regulation • First Aid • Types and uses of personal protective equipments. • Basic calculations • Manufacturer's operation manual. • Familiarity with pre-operation checklist • Positive work values • Basic literacy and numeracy • Types of machine ratings and value • Causes and types of tripping	• Proper use of tools and equipment • Team work • Communication skills • Planning • Time management • Problem solving • Judgment and decision making • Operation and control



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