

QUALIFICATION PACK – OCCUPATIONAL STANDARD FOR INFRASTRUCTURE EQUIPMENT INDUSTRY

What are Occupational Standards(OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

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Introduction

Qualification Pack - Junior Bore Well Drilling Machine Operator

SECTOR:	Infrastructure Equipment
SUB SECTOR:	Equipment Operations
OCCUPATION:	Machine Operation
REFERENCE ID:	IES/Q0125
ALIGNED TO:	NCO-2015/8113.0800

Brief Job Description: A junior bore well drilling machine operator assists in setting up and guiding the operator in operating portable drilling rig to drill wells. He helps in starting and controlling the drilling actions by assisting in lowering of well casing into the well bore.

Personal Attributes: The job requires an individual to be physically agile, strong and have good eye sight. He should maintain constant alertness to the multiple concurrent activities during drilling operations. He should possess basic numerical skills and is required to be mentally alert at all times.

Job Details

Qualifications Pack Code	IES/Q0125		
Job Role	Junior Bore Well Drilling Machine Operator		
Credits(NSQF)	TBD	Version number	1.0
Sector	Infrastructure Equipment	Drafted on	09/08/16
Sub-sector	Equipment Operations	Last reviewed on	20/12/17
Occupation	Machine Operation	Next review date	26/12/20
NSQC Clearance on			

Job Role	Junior Bore Well Drilling Machine Operator
Role Description	A junior bore well drilling machine operator assists in setting up and operating portable drilling rig to drill wells. He helps in starting and controlling the drilling actions by assisting in lowering of well casing into the well bore.
NSQF level	3
Minimum Educational Qualifications	Class VIII
Maximum Educational Qualifications	NA
Prerequisite license for Training	Certification Training in Drilling Operation preferred
Minimum Job Entry Age	18 years
Experience	0-1 year experience in assisting in drilling operations
Applicable National Occupational Standards (NOS)	<p>Compulsory</p> <ol style="list-style-type: none"> IES/N0152 Assist in carrying out pre-operation checks on bore well drilling equipment IES/N0153 Assist in bore well drilling operations IES/N0154 Assist in regular maintenance of the bore well drilling equipment IES/N7601 Comply with worksite health and safety guidelines
Performance Criteria	As described in the relevant OS units

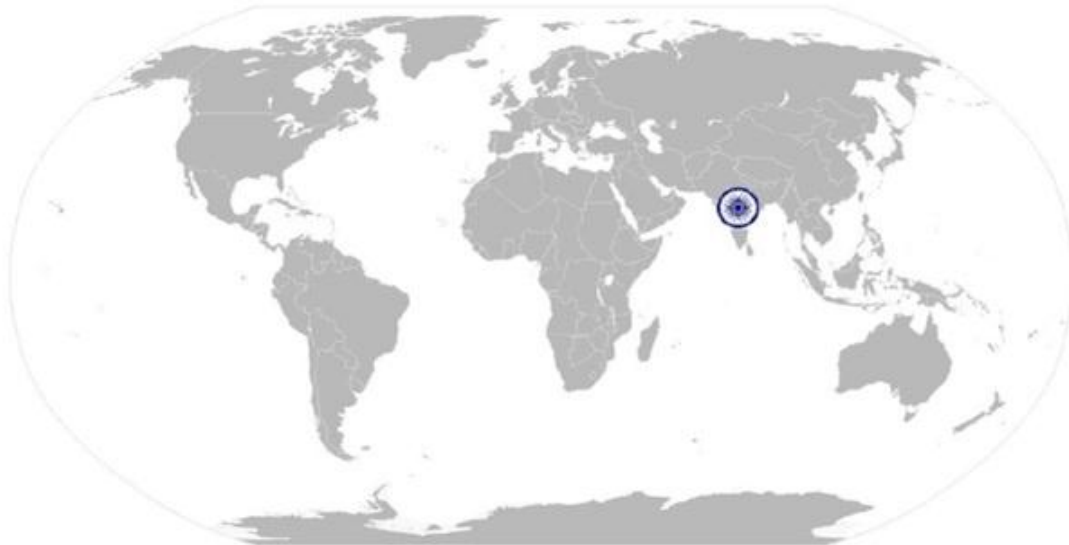
Definition

Keywords /Terms	Description
Sector	Sector is a conglomeration of different business operations having similar businesses and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Vertical	Vertical may exist within a sub-sector representing different domain areas or the client industries served by the industry.
Occupation	Occupation is a set of job roles, which perform similar/related set of functions in an industry.
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of OS.
Sub-functions	Sub-functions are sub-activities essential to fulfill achieving the objectives of the function.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the knowledge and understanding; he/she needs to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are Occupational Standards which apply uniquely in the Indian context.
Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.
Qualifications Pack(QP)	Qualifications Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification pack code.
Unit Code	Unit Code is a unique identifier for an Occupational Standard, which is denoted by an 'N'.
Unit Title	Unit Title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to find the required one.
Scope	Scope is the set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on the quality of required performance.
Knowledge and Understanding	Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform up to the required standard.

Acronyms	Keywords /Terms	Description
	OS	Occupational Standard(s)
	NOS	National Occupational Standard(s)
	QP	Qualifications Pack
	NSQF	National Skill Qualifications Framework
	ITI	Industrial Training Institute
	HCV	Heavy Commercial Vehicle
	SHE	Safety Health and Environment
	SOP	Standard Operating Procedure
TBD	To Be Determined	

IES/N0152 Assist in carrying out pre-operation checks on bore well drilling equipment

National Occupational Standard



Overview

This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for activities that are required for assisting in conducting pre-checks on the bore well drilling machine before starting the bore well drilling operations.

IES/N0152 Assist in carrying out pre-operation checks on bore well drilling equipment

Unit Code	IES/N0152
Unit Title (Task)	Assist in carrying out pre-operation checks on bore well drilling equipment
Description	This unit provides insight into activities that are required for assisting in conducting pre-checks on the bore well machine before starting the operations.
Scope	This unit/task covers the following: <ul style="list-style-type: none"> • Pre-operation checks • Reporting and documentation
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Pre-operation checks	To be competent, the user/individual on the job must be able to: <ul style="list-style-type: none"> PC1. check for tires-damages and bulges and report to the operator/supervisor PC2. check for wheels, loose lug bolts, bent rims, cracks as per instructions from the operator/supervisor PC3. tightening of bolts as per the instructions from the operator/supervisor PC4. assist operator in checking fluid levels of engine crank case, radiator coolant and battery electrolyte PC5. check for drill rods availability as per the drilling requirements or as per instructions from the operator/supervisor PC6. check for the diesel availability and if needed, report to the operator PC7. operate jacks to level the vehicle, if needed use wooden jacks as per the instructions from the operator PC8. tighten all the pipes, valves and bolts before running the machine as per operator's instructions PC9. connect the oil pipe to the main machine (which contains rig mast) that is used for hammer lubrication as directed by the operator PC10. check the availability of tools required to maintain the machine PC11. assist the operator in servicing the hammer before connecting it to the mast PC12. polish the drill bit for better drilling as per instructions from the operator PC13. assist in cleaning the area to level the surface for performing drilling
Reporting and documentation	<ul style="list-style-type: none"> PC14. report defects precisely to the operator/ supervisor if beyond scope of the role PC15. assist in maintaining a checking/maintenance logbook to record all activities performed before starting the paver operation
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company /	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> KA1. the organization operations, maintenance and safety related guidelines KA2. the operational standards & procedures followed in the company in timeframe in which the complaint/problem should be resolved

IES/N0152 Assist in carrying out pre-operation checks on bore well drilling equipment

organization and its processes)	KA3. reporting structure of the company KA4. location of specialized tools and the equipment KA5. location and process for storage and disposal of waste material
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. overview of types of bore well drilling machine and the general applications with respect to each machine KB2. technical specifications, features and performance of different types of bore well drilling machines KB3. components of Drilling machine and its functioning KB4. basics of engine and sub systems; fuel, lubrication and cooling systems KB5. basics of transmission, auto-electrical functioning and repairs KB6. different types of hydraulic mechanisms, and principles of friction KB7. basics of electrical systems including control panel KB8. controls, levers and switches in order to assist in operating the bore well drilling machine KB9. procedure of topping up fuel, lube oil and coolant in the machine KB10. optimal working parameters- engine oil pressure, hydraulic oil pressure and temperatures KB11. manufacturer's specifications for tools and supplies
Skills (S)	
A. Core Skills / Generic Skills	Writing Skills The user/ individual on the job needs to know and understand how to: SA1. record information/observations on activities/incidents as per the prescribed norms
	Reading Skills The user/ individual on the job needs to know and understand how to: SA2. read and comprehend basic signs, symbols, diagrams, charts and decals on the equipment & at work site SA3. read and understand the applicable relevant aspects of the equipment operation & maintenance manuals
	Oral Communication (Listening and Speaking Skills) The user/ individual on the job needs to know and understand how to: SA4. use correct technical terms/phrases while interacting with other co-workers & supervisor SA5. explain/instruct other team members effectively in a clear and concise manner SA6. listen attentively and understand the queries /comments raised by other team members
	B. Professional Skills
	Decision Making The user/ individual on the job needs to know and understand how to: SB1. decide when to escalate and seek assistance if the problem is beyond scope
	Plan and Organize The user/ individual on the job needs to know and understand how to: SB2. prioritize and schedule maintenance activity on equipment to support

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	operational needs
	SB3. plan and organise the work schedule in coordination with other team members & supervisor
	SB4. execute the tasks efficiently within the time frame allotted and prescribed quality norms; with minimal supervision
	Customer Centricity
	The user/ individual on the job needs to know and understand how to:
	SB5. ensure quality service is delivered as committed to achieve high levels of customer satisfaction
	Problem Solving
	The user/ individual on the job needs to know and understand how to:
SB6. evaluate the possible solutions and initiate appropriate remedial measures and actions	
Analytical Thinking	
The user/ individual on the job needs to know and understand how to:	
SB7. apply common sense and reasoning skills to identify the cause of delays and difficulties in execution	
Critical Thinking	
The user/ individual on the job needs to know and understand how to:	
SB8. apply knowledge and judgement acquired through experience and awareness to execute tasks efficiently	

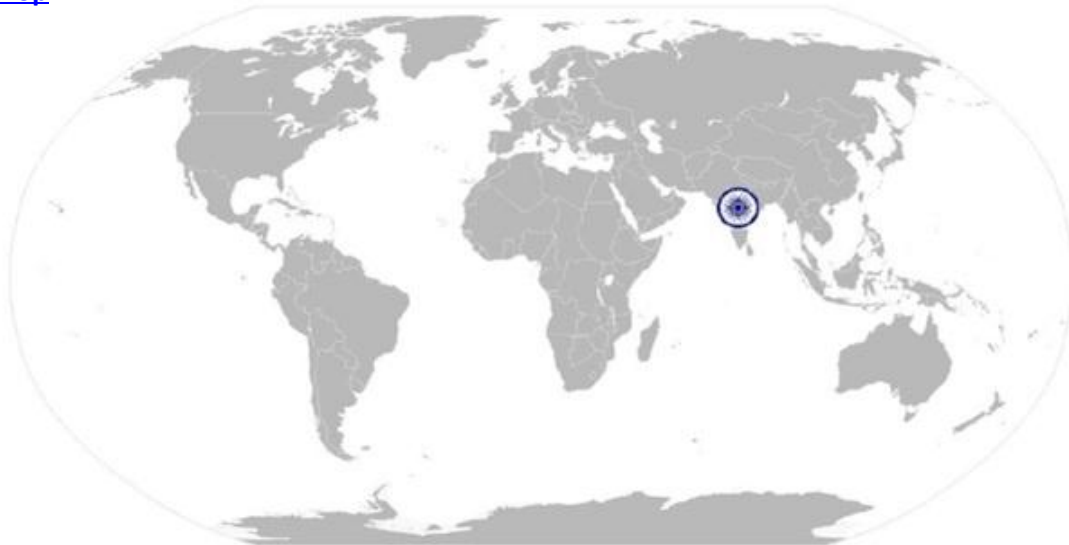


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NOS Version Control

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Sector	Infrastructure Equipment	Drafted on	09/08/16
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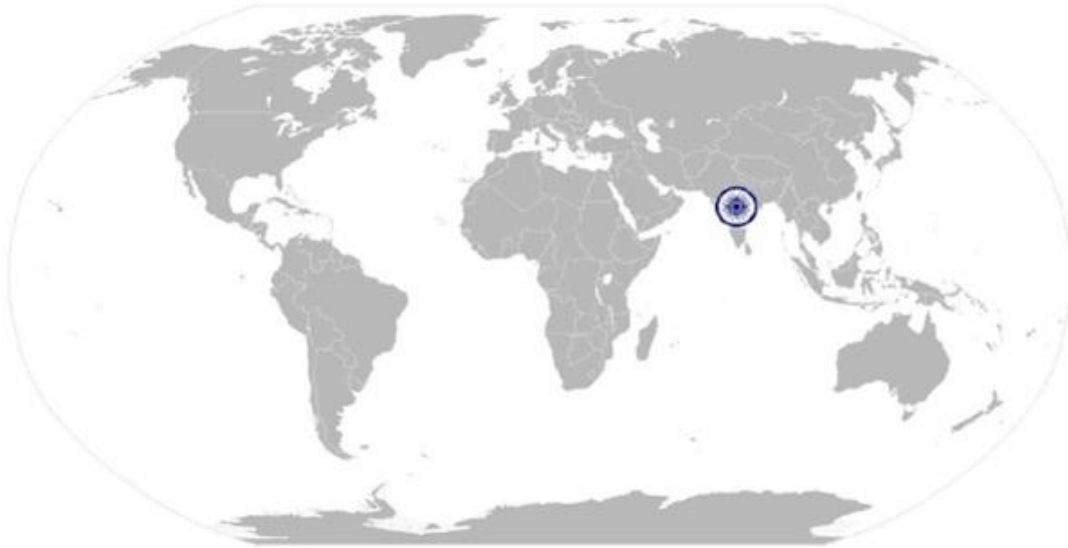
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Assist in bore well drilling operations

National Occupational Standard



Overview

This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for activities that are required to assist in operating of bore well drilling equipment.

IES/N0153 Assist in bore well drilling operations

National Occupational Standard

Unit Code	IES/N0153
Unit Title (Task)	Assist in bore well drilling operations
Description	This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for activities that are required to assist in operating of bore well drilling equipment.
Scope	This unit/task covers the following: <ul style="list-style-type: none"> • Bore well drilling operations • Reporting and documentations
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Bore well drilling operations	To be competent, the user/individual on the job must be able to: <ul style="list-style-type: none"> PC1. pick up required material or equipment from storage and place them near the drilling area PC2. grease the drill rods as per the instructions from the operator/supervisor PC3. assist the operator in placing casing pipe and connecting drill rods to the rotate motor PC4. assist the operator in monitoring RPM, air discharge temperature and pressure, engine water temperature and pressure and sump pressure displayed in the compressor unit PC5. check the engine oil regularly in two machines i.e. main truck and the supporting truck PC6. assist the operator in adding fluids, coolants and fuel into the equipment PC7. monitor the drilling operation when the operator is not around the equipment PC8. clean the area regularly while drilling is in process as per instructions from the operator/supervisor PC9. place the tools and other parts at its place when drilling is completed
Reporting and documentation	PC10. assist the operator in recording the drilling process as per the organization standards
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> KA1. the organization operations, maintenance and safety related guidelines KA2. the operational standards & procedures followed in the company in timeframe in which the complaint/problem should be resolved KA3. reporting structure of the company KA4. location of specialized tools and the equipment KA5. location and process for storage and disposal of waste material KA6. contact person/area in case of emergency
B. Technical Knowledge	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> KB1. technical specifications, features and performance of different types of bore well drilling machines KB2. factors that affect equipment stability, such as ground and supporting

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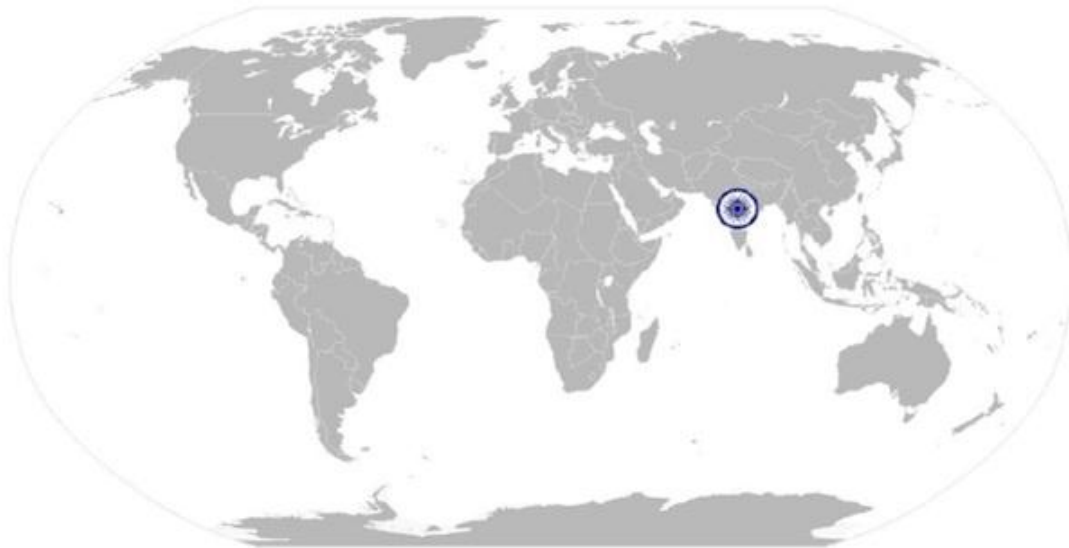
Assist in bore well drilling operations

	<p>conditions</p> <p>KB3. controls, levers and switches in order to assist operator in bore well drilling operations</p> <p>KB4. actual and potential hazards, such as overhead utilities and guide wires, other equipment, personnel and vehicular traffic</p> <p>KB5. safety controls and equipment such as emergency stop switches and fire extinguishers</p> <p>KB6. safety measures to be followed at time of emergencies to avoid damage</p> <p>KB7. roles of personnel on site such as operator, supervisor and others</p>
Skills (S)	
A. Core Skills / Generic Skills	Writing Skills
	The user/ individual on the job needs to know and understand how to: SA1. record information/observations on activities/incidents as per the prescribed norms
	Reading Skills
	The user/ individual on the job needs to know and understand how to: SA2. read and comprehend basic signs, symbols, diagrams, charts and decals on the equipment & at work site SA3. read and understand the applicable relevant aspects of the equipment operation & maintenance manuals
	Oral Communication (Listening and Speaking Skills)
	The user/ individual on the job needs to know and understand how to: SA4. use correct technical terms/phrases while interacting with other co-workers & supervisor SA5. explain/instruct other team members effectively in a clear and concise manner SA6. listen attentively and understand the queries /comments raised by other team members
B. Professional Skills	Decision Making
	The user/ individual on the job needs to know and understand how to: SB1. decide when to escalate and seek assistance if the problem is beyond scope
	Plan and Organize
	The user/ individual on the job needs to know and understand how to: SB2. prioritize and schedule maintenance activity on equipment to support operational needs SB3. plan and organise the work schedule in coordination with other team members & supervisor SB4. execute the tasks efficiently within the time frame allotted and prescribed quality norms; with minimal supervision
	Customer Centricity
	The user/ individual on the job needs to know and understand how to: SB5. ensure quality service is delivered as committed to achieve high levels of customer satisfaction
	Problem Solving

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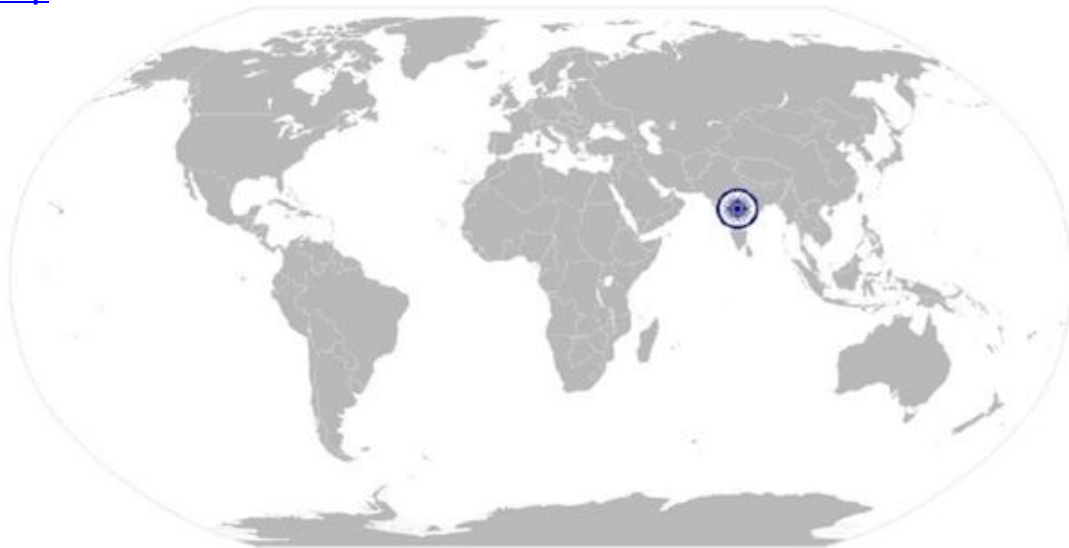
	The user/ individual on the job needs to know and understand how to: SB6. evaluate the possible solutions and initiate appropriate remedial measures and actions
	Analytical Thinking
	The user/ individual on the job needs to know and understand how to: SB7. apply common sense and reasoning skills to identify the cause of delays and difficulties in execution
	Critical Thinking
	The user/ individual on the job needs to know and understand how to: SB8. apply knowledge and judgement acquired through experience and awareness to execute tasks efficiently



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NOS Version Control

NOS Code	IES/N0153		
Credits (NSQF)	TBD	Version number	1.0
Sector	Infrastructure Equipment	Drafted on	09/08/16
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IES/N0154 Assist in regular maintenance of the bore well drilling equipment

National Occupational Standard



Overview

This unit provides Performance Criteria, Knowledge & Understanding and Skills & Ability for activities that are required for performing routine maintenance and troubleshooting of the bore well drilling equipment.

IES/N0154 Assist in regular maintenance of the bore well drilling equipment

National Occupational Standard

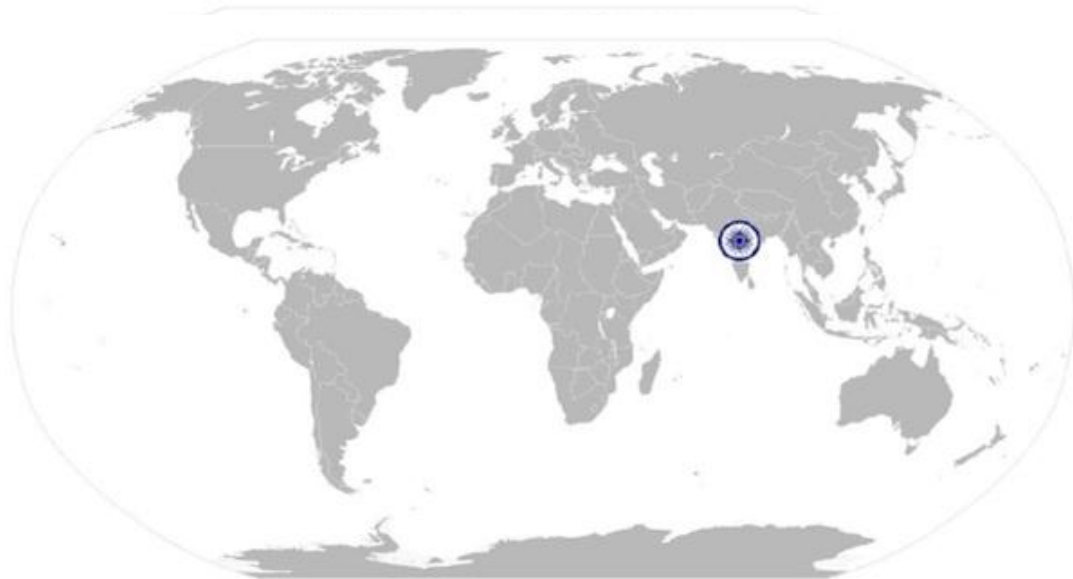
Unit Code	IES/N0154
Unit Title (Task)	Assist in regular maintenance of the bore well drilling equipment
Description	This unit provides an insight into activities that are required for performing routine maintenance and troubleshooting of the bore well drilling equipment.
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Routine maintenance • Repair and troubleshooting • Documentation and reporting
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Routine maintenance	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. assist in checking fluid levels, coolant, oils and topping</p> <p>PC2. check for leakages, tightening and compressor conditions after every drill operation</p> <p>PC3. assist the operator in repairing and maintenance of the equipment</p> <p>PC4. check the battery level and condition of the terminals as per instructions from the operator</p> <p>PC5. ensure all the tools are kept in the designated place after usage</p> <p>PC6. report defects precisely to the supervisor if beyond scope of his role</p>
Repair and troubleshooting	<p>PC7. use appropriate tools while troubleshooting</p> <p>PC8. assist operator in diagnosing problem and identifying appropriate repair procedures</p> <p>PC9. dispose waste as per the guidelines of the site/ organization</p>
Documentation and reporting	<p>PC10. follow reporting procedures as laid down by the employer</p> <p>PC11. assist in completing all documentation in the prescribed standards in a timely manner</p> <p>PC12. report defects precisely to the operator/ supervisor if beyond scope of his role</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. the organization operations, maintenance and safety related guidelines</p> <p>KA2. the operational standards & procedures followed in the company in timeframe in which the complaint/problem should be resolved</p> <p>KA3. reporting structure of the company</p> <p>KA4. location of specialized tools and the equipment</p> <p>KA5. location and process for storage and disposal of waste material</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. maintenance schedule of the equipment</p> <p>KB2. basics of engine and sub systems; fuel, lubrication and cooling systems</p> <p>KB3. basics of transmission, auto-electrical functioning and repairs</p> <p>KB4. different types of hydraulic mechanisms, and principles of friction</p> <p>KB5. basics of electrical systems including control panel</p> <p>KB6. control and switches needed to operate the bore well drilling machine appropriately</p>

IES/N0154 Assist in regular maintenance of the bore well drilling equipment

	KB7. common defects and general causes of breakdown KB8. spill kit procedures
Skills (S)	
A. Core Skills / Generic Skills	Writing Skills
	The user/ individual on the job needs to know and understand how to: SA1. record information/observations on activities/incidents as per the prescribed norms
	Reading Skills
	The user/ individual on the job needs to know and understand how to: SA2. read and comprehend basic signs, symbols, diagrams, charts and decals on the equipment & at work site SA3. read and understand the applicable relevant aspects of the equipment operation & maintenance manuals
	Oral Communication (Listening and Speaking Skills)
	The user/ individual on the job needs to know and understand how to: SA4. use correct technical terms/phrases while interacting with other co-workers & supervisor SA5. explain/instruct other team members effectively in a clear and concise manner SA6. listen attentively and understand the queries /comments raised by other team members
B. Professional Skills	Decision Making
	The user/ individual on the job needs to know and understand how to: SB1. decide when to escalate and seek assistance if the problem is beyond
	Plan and Organize
	The user/ individual on the job needs to know and understand how to: SB2. prioritize and schedule maintenance activity on equipment to support operational needs SB3. plan and organise the work schedule in coordination with other team members & supervisor SB4. execute the tasks efficiently within the time frame allotted and prescribed quality norms; with minimal supervision
	Customer Centricity
	The user/ individual on the job needs to know and understand how to: SB5. ensure quality service is delivered as committed to achieve high levels of customer satisfaction
	Problem Solving
	The user/ individual on the job needs to know and understand how to: SB6. evaluate the possible solutions and initiate appropriate remedial measures and actions
	Analytical Thinking
	The user/ individual on the job needs to know and understand how to: SB7. apply common sense and reasoning skills to identify the cause of delays and difficulties in execution
Critical Thinking	
The user/ individual on the job needs to know and understand how to:	

IES/N0154 Assist in regular maintenance of the bore well drilling equipment

	SB8. apply knowledge and judgement acquired through experience and awareness to execute tasks efficiently
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IES/N0154 Assist in regular maintenance of the bore well drilling equipment
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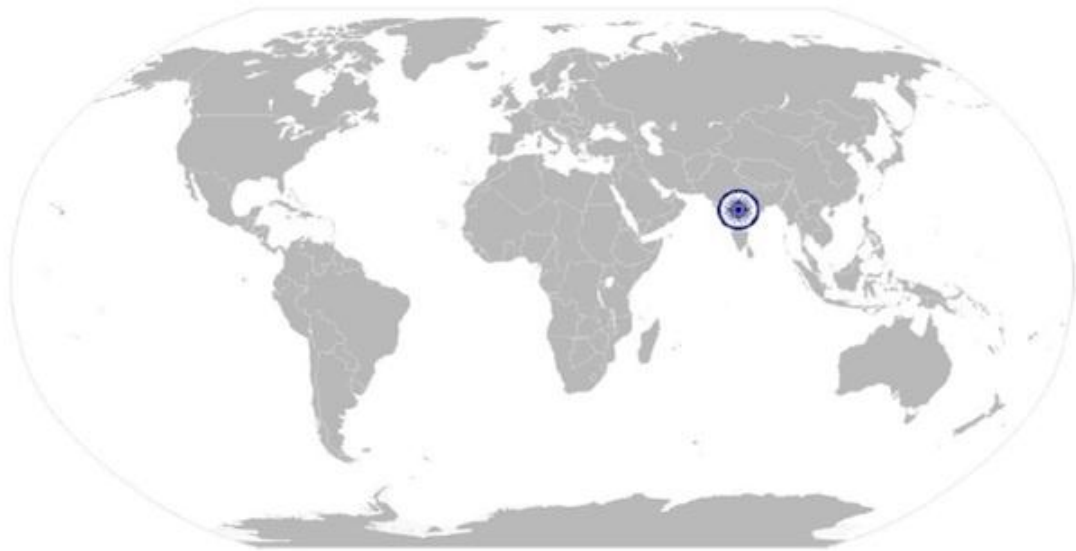
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IES/N7601

Comply with worksite health and safety guidelines

National Occupational Standard



Overview

This unit is about adhering to health and safety requirements at the worksite during equipment operations.

IES/N7601 Comply with worksite health and safety guidelines

Unit Code	IES/N7601
Unit Title (Task)	Comply with worksite health and safety guidelines
Description	This unit is about adhering to health and safety requirements at the worksite during equipment operations.
Scope	This unit/task covers the following: <ul style="list-style-type: none"> • Worksite health and safety
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Worksite health and safety	To be competent, the user/individual on the job must be able to: <p>PC1. comply with safety, health, security and environment related regulations/ guidelines at the work site</p> <p>PC2. use Personal Protective Equipment (PPE) and other safety gear as applicable to the equipment and the worksite</p> <p>PC3. follow safety measures during operations to ensure that the health and safety of self or others (including members of the public) is not at risk</p> <p>PC4. carry out operations as per the manufacturer’s and worksite related health and safety guidelines</p> <p>PC5. handle the transport, storage and disposal of hazardous materials and waste in compliance with worksite health, safety and environmental guidelines</p> <p>PC6. operate various grades of fire extinguishers, as applicable</p> <p>PC7. support in administering basic first aid and report to concerned team members, as required, in case of an accident</p> <p>PC8. respond promptly and appropriately to an accident/ incident or emergency situation, within limits of role and responsibility</p> <p>PC9. record and report details related to operations, incidents or accidents, as applicable</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company/ organization and its processes)	The user/individual on the job needs to know and understand: <p>KA1. comply with safety, health, security and environment related regulations/ guidelines at the work site</p> <p>KA2. use Personal Protective Equipment (PPE) and other safety gear as applicable to the equipment and the worksite</p> <p>KA3. follow safety measures during operations to ensure that the health and safety of self or others (including members of the public) is not at risk</p> <p>KA4. carry out operations as per the manufacturer’s and worksite related health and safety guidelines</p> <p>KA5. handle the transport, storage and disposal of hazardous materials and waste in compliance with worksite health, safety and environmental guidelines</p> <p>KA6. operate various grades of fire extinguishers, as applicable</p> <p>KA7. support in administering basic first aid and report to concerned team members, as required, in case of an accident</p> <p>KA8. respond promptly and appropriately to an accident/ incident or</p>

IES/N7601

Comply with worksite health and safety guidelines

	<p>emergency situation, within limits of your role and responsibility</p> <p>KA9. record and report details related to operations, incidents or accidents, as applicable</p>
<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. manufacturer's guidelines related to health and safety requirements</p> <p>KB2. common types of health, safety, environment and security risks related to the worksite and operations</p> <p>KB3. types, use and importance of Personal Protective Equipment (PPE) and other safety gear</p> <p>KB4. safe working practices to avoid common hazards and risks</p> <p>KB5. guidelines for transport, storage and disposal of hazardous materials and waste</p> <p>KB6. types of common hazards and risks at the worksite including fire, electrical, gas emergencies, accidents, incidents, structure collapse, machine breakdown</p> <p>KB7. safe lockdown/ stopping of machinery use in case of emergencies and incidents/accidents</p> <p>KB8. types of fire extinguishers and their use</p> <p>KB9. common injuries and appropriate basic first aid treatment e.g. electrical shock, bleeding, wounds, fractures, minor burns, eye injuries</p>
<p>Skills (S)</p>	
<p>A. Core Skills / Generic Skills</p>	<p>Writing Skills</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. record information/observations on any health and safety related incidents/activities as per the prescribed norms</p> <p>Reading Skills</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA2. read and comprehend basic signs, symbols, charts and decals related to health and safety at work site</p> <p>SA3. read and understand the applicable relevant safety aspects of equipment operation at work site</p> <p>Oral Communication (Listening and Speaking Skills)</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA4. use correct technical terms/phrases while interacting with other co-workers & supervisor</p> <p>SA5. explain/instruct other team members effectively in a clear and concise manner</p> <p>SA6. listen attentively and understand the queries /comments raised by other team members</p>
<p>B. Professional Skills</p>	<p>Decision Making</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SB1. respond in time to emergencies / accidents in line with organisational /worksite procedures</p> <p>SB2. decide when to escalate and seek assistance if the problem is beyond</p> <p>Plan and Organize</p> <p>The user/ individual on the job needs to know and understand how to:</p>

IES/N7601

Comply with worksite health and safety guidelines

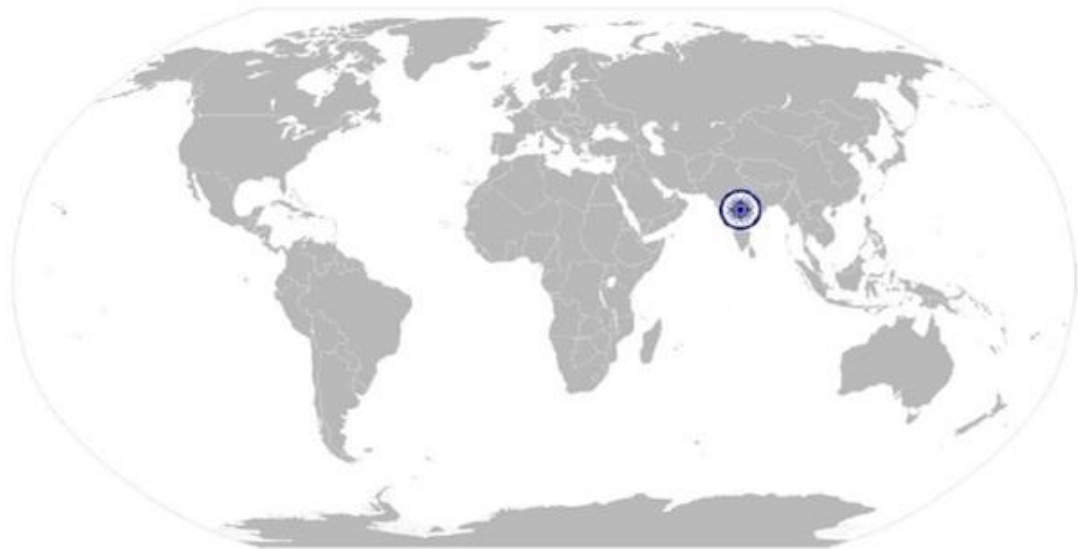
	SB3. plan and organise the work schedule adhering to all safety guidelines and instructions
	SB4. execute the tasks in a safe manner by ensuring proper use of PPE and other safety gear ; with minimal supervision
	Customer Centricity
	The user/ individual on the job needs to know and understand how to: SB5. ensure quality service is delivered as committed to achieve high levels of customer satisfaction
	Problem Solving
	The user/ individual on the job needs to know and understand how to: SB6. evaluate the possible solutions and initiate appropriate remedial measures and actions
	Analytical Thinking
	The user/ individual on the job needs to know and understand how to: SB7. apply common sense and reasoning skills to identify the cause of delays and difficulties in execution
	Critical Thinking
The user/ individual on the job needs to know and understand how to: SB8. apply knowledge and judgement acquired through experience and awareness to execute tasks efficiently	



IES/N7601 **Comply with worksite health and safety guidelines**
NOS Version Control

NOS Code	IES/N7601		
Credits (NSQF)	TBD	Version number	1.0
Sector	Infrastructure Equipment	Drafted on	09/08/16
Industry Sub-sector	Equipment Operations	Last reviewed on	20/12/17
Occupation	Machine Operation	Next review date	26/12/20

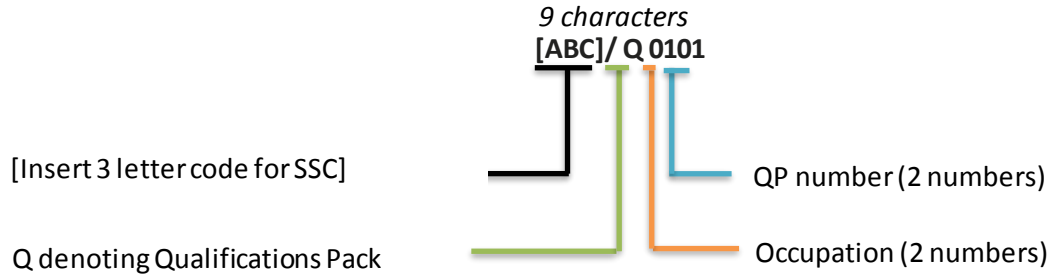
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Annexure

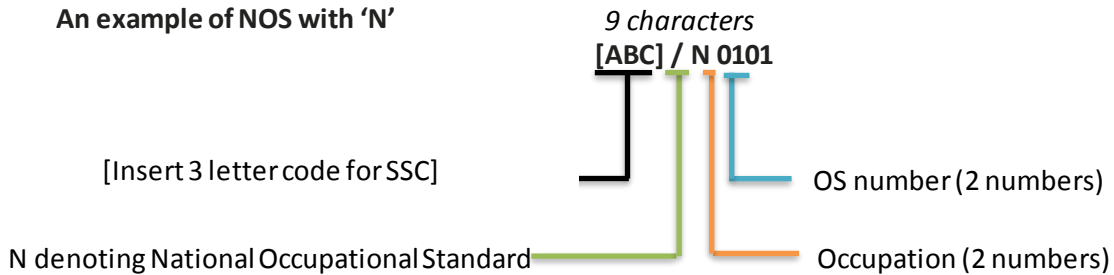
Nomenclature for QP and NOS

Qualifications Pack



Occupational Standard

An example of NOS with 'N'



The following acronyms/codes have been used in the nomenclature above:

Sub-sector	Range of Occupation numbers
Equipment Operations	1 to 10
Equipment Service and spares	11 to 20
Equipment Production	21 to 40
Equipment Sales	41 to 50
Equipment Financing	51 to 55
Core Enablers	56 to 65
Other Enablers	66 to 75
Common Occupations	76 to 85

Sequence	Description	Example
Three letters	Industry name	IES
Slash	/	/
Next letter	Whether QP or NOS	N
Next two numbers	Occupation code	01
Next two numbers	OS number	01

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role Junior Bore Well Drilling Machine Operator

Qualification Pack Code IES/Q0125

Sector Skill Council IESC

Guidelines for Assessment:

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC
3. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.
4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below)
5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criterion
6. To pass the Qualification Pack, trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment
7. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack

Compulsory NOS				Marks Allocation		
Total Marks: 100						
Assessment Outcomes	Assessment Criteria for Outcomes	Total Marks	Out Of	Theory	Skills Practical	
1. IES/N0152 Assist in carrying out pre-operation checks on bore well drilling equipment	PC1. check for tires-damages and bulges and report to the operator/ supervisor	35	3	1	2	
	PC2. check for wheels, loose lug bolts, bent rims, cracks as per instructions from the operator/ supervisor		3	1	2	
	PC3. tightening of bolts as per the instructions from the operator/ supervisor		1.5	0.5	1	
	PC4. assist operator in checking fluid levels of engine crank case, radiator coolant and battery electrolyte		1.5	0.5	1	
	PC5. check for drill rods availability as per the drilling requirements or as per instructions from the operator/		3	1	2	

	supervisor				
	PC6. check for the diesel availability and if needed, report to the operator		3	1	2
	PC7. operate jacks to level the vehicle if needed use wooden jacks as per the instructions from the operator		3	1	2
	PC8. tighten all the pipes, valves and bolts before running the machine as per operator's instructions		2.5	0.5	2
	PC9. connect the oil pipe to the main machine (which contains rig mast) that is used for hammer lubrication as directed by the operator		3	1	2
	PC10. check the availability of tools required to maintain the machine		3	1	2
	PC11. assist the operator in servicing the hammer before connecting it to the mast		1.5	0.5	1
	PC12. polish the drill bit for better drilling as per instructions from the operator		2	1	1
	PC13. assist in cleaning the area to level the surface for performing drilling		2	1	1
	PC14. report defects precisely to the operator/supervisor if beyond scope of the role		1.5	0.5	1
	PC15. assist in maintaining a checking/maintenance logbook to record all activities performed before starting the paver operation		1.5	0.5	1
	Total		35	12	23
2. IES/N0153 Assist in bore well drilling operations	PC1. pick up required material or equipment from storage and place them near the drilling area	30	3	1	2
	PC2. grease the drill rods as per the instructions from the operator/supervisor		3	1	2
	PC3. assist the operator in placing casing pipe and connecting drill rods to the rotate motor		3	1	2
	PC4. assist the operator in monitoring RPM, air discharge temperature and pressure, engine water temperature and pressure and sump pressure displayed in the compressor unit		3	1	2
	PC5. check the engine oil regularly in two machines i.e. main truck and the supporting truck		3	1	2

	PC6. assist the operator in adding fluids, coolants and fuel into the equipment		3	1	2
	PC7. monitor the drilling operation when the operator is not around the equipment		3	1	2
	PC8. clean the area regularly while drilling is in process as per instructions from the operator/supervisor		3	1	2
	PC9. place the tools and other parts at its place when drilling is completed		3	1	2
	PC10. assist the operator in recording the drilling process as per the organization standards		3	1	2
	Total		30	10	20
3. IES/N0154 Assist in regular maintenance of the bore well drilling equipment	PC1. assist in checking fluid levels, coolant, oils and topping		2	1	1
	PC2. check for leakages, tightening and compressor conditions after every drill operation		2.5	1	1.5
	PC3. assist the operator in repairing and maintenance of the equipment		1.5	0.5	1
	PC4. check the battery level and condition of the terminals as per instructions from the operator		2	0.5	1.5
	PC5. ensure all the tools are kept in the designated place after usage		1.5	0.5	1
	PC6. report defects precisely to the supervisor if beyond scope of his role	20	1.5	0.5	1
	PC7. use appropriate tools while troubleshooting		1.5	0.5	1
	PC8. assist operator in diagnosing problem and identifying appropriate repair procedures		1.5	0.5	1
	PC9. dispose waste as per the guidelines of the site/ organization		1.5	0.5	1
	PC10. follow reporting procedures as laid down by the employer		1.5	0.5	1
	PC11. assist in completing all documentation in the prescribed standards in a timely manner		1.5	0.5	1
	PC12. report defects precisely to the operator/supervisor if beyond scope of his role		1.5	0.5	1
	Total		20	7	13

4. IES/N7601 Comply with worksite health and safety guidelines	PC1. comply with safety, health, security and environment related regulations/ guidelines at the work site	15	1.5	0.5	1
	PC2. use Personal Protective Equipment (PPE) and other safety gear as applicable to the equipment and the worksite		2.5	0.5	2
	PC3. follow safety measures during operations to ensure that the health and safety of self or others (including members of the public) is not at risk		2	1	1
	PC4. carry out operations as per the manufacturer's and worksite related health and safety guidelines		1.5	0.5	1
	PC5. handle the transport, storage and disposal of hazardous materials and waste in compliance with worksite health, safety and environmental guidelines		1.5	0.5	1
	PC6. operate various grades of fire extinguishers, as applicable		1.5	0.5	1
	PC7. support in administering basic first aid and report to concerned team members, as required, in case of an accident		1.5	0.5	1
	PC8. respond promptly and appropriately to an accident/ incident or emergency situation, within limits of role and responsibility		1.5	0.5	1
	PC9. record and report details related to operations, incidents or accidents, as applicable		1.5	0.5	1
	Total		15	5	10
Grand Total		100	34	66	