

## QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR MINING INDUSTRY



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### 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 standard 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

### Qualifications Pack- Haulage Operator

**SECTOR:** MINING

**SUB-SECTOR:** Underground Mines

**OCCUPATION:** Mining Operations

**REFERENCE ID:** MIN/Q 0413

**ALIGNED TO:** NCO-2004/8333.50

A Haulage operator ensures removal of blasted material/ other material in the mine using haulage equipment

**Brief Job Description:** A haulage operator removes the cut/ blasted material from the working face or any other raw material required in the operation of the mine, with the help of haulage equipment like tugger, endless haulage, main and tail haulage and remotely controlled haulages in such a manner as to enhance the performance of the loading/cutting machines and maximize the productivity of the overall section.

**Personal Attributes:** This job requires the individual to concentrate on the job at hand and complete it efficiently and effectively without any accidents so diligence and hard-working are desired attributes for individuals performing this role. He must also demonstrate strong work ethics, an ability to communicate courteously with co-workers, and must be good with following instructions of the supervisor.

Job Details	<b>Qualifications Pack Code</b>	MIN/Q 0413		
	<b>Job Role</b>	Haulage Operator		
	<b>Credits(NSQF)</b>	TBD	<b>Version number</b>	1.0
	<b>Industry</b>	Mining	<b>Drafted on</b>	15/12/2014
	<b>Sub-sector</b>	Underground mines	<b>Last reviewed on</b>	24/03/2015
	<b>Occupation</b>	Mining Operations	<b>Next review date</b>	24/03/2017

<b>Job Role</b>	<b>Haulage Operator</b>
<b>Role Description</b>	Operates the engine which pulls loaded and unloaded tubs on the haulage tracks by means of wire rope. May also undertake minor repairs
<b>NSQF level</b>	4
<b>Minimum Educational Qualification</b>	Class X
<b>Maximum Educational Qualification</b>	Not Applicable
<b>Training</b> (Suggested but not mandatory)	<ol style="list-style-type: none"> <li>1. Technical and gallery training as per first schedule, Mining Vocational Training Rules (MVTR) 1966.</li> <li>2. Refresher training if absent from mines for a period of one year or more before re-employment.</li> <li>3. 5S</li> <li>4. Safety</li> <li>5. Quality Management</li> </ol>
<b>Experience</b>	6 months
<b>Applicable National Occupational Standards</b>	<p><b>Compulsory:</b> Click on the hyperlink to read/download the required NOS</p> <ol style="list-style-type: none"> <li>1. MIN/ N 0439 (<a href="#">Prepare Haulage</a>)</li> <li>2. MIN/ N 0440 (<a href="#">Perform Haulage Operations</a>)</li> <li>3. MIN/ N0901 (<a href="#">Health and Safety</a>)</li> </ol> <p><b>Optional:</b> Not applicable</p>
<b>Performance Criteria</b>	As described in the relevant OS units

Definitions

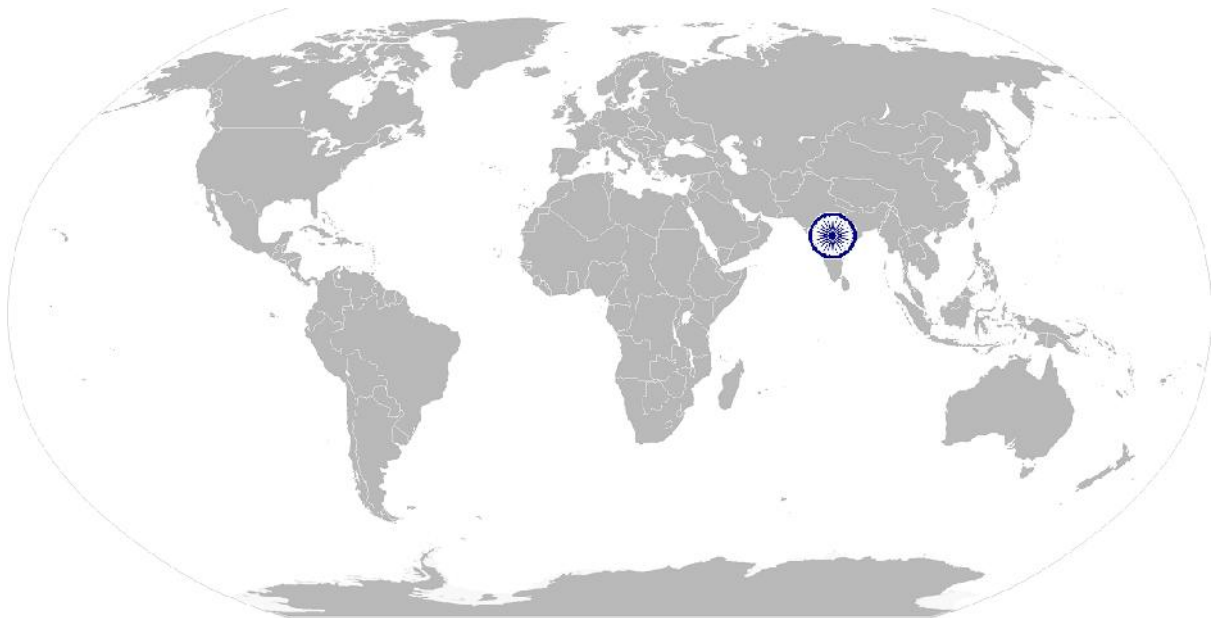
Keywords /Terms	Description
Sector	Sector is a conglomeration of different business operations having similar businesses and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
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 analysis and form the basis of OS.
Job Role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
OS	OS specify the standard of performance an individual must achieve when carrying out a function in the workplace, together with the knowledge and understanding they need to meet that standard consistently. Occupational Standard 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.
NOS	NOS are Occupational Standard which apply uniquely in the Indian context.
Qualification Pack Code	Qualification Pack Code is a unique reference code that identifies a qualification pack.
Qualification Pack	Qualification Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A Qualification 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 verify that this is the appropriate OS they are looking for.
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 to the required standard.
Organizational Context	Organizational Context includes the way the organization is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills or Generic Skills	Core Skills or Generic Skills are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.



Acronyms

Keywords /Terms	Description
SCMS	Skill council for Mining Sector
NOS	National Occupational Standard
NSQF	National Skill Qualification Framework
NVEQF	National Vocational Educational Qualification Framework
NVQF	National Vocational Qualification Framework
OS	Occupational Standard
PC	Performance Criteria
QP	Qualification Pack
SSC	Sector Skill Council

# National Occupational Standard



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## Overview

This unit is about preparing the Haulage for activities that need to be carried out during a shift.

MIN/N 0439 Prepare Haulage

<b>Unit Code</b>	<b>MIN/ N 0439</b>
<b>Unit Title (Task)</b>	<b>Prepare Haulage</b>
<b>Description</b>	This unit is about preparing the Haulage for activities that need to be carried out during a shift
<b>Scope</b>	<p>This OS unit/task covers the following:</p> <ul style="list-style-type: none"> <li>• Conducting pre-operation checks to ensure the Haulage is safe to use.</li> <li>• Recording details of checking and maintenance</li> </ul>
<b>Performance Criteria(PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Pre-operation checks</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Examine the engine, its brake and all appliances in his charge at the beginning of his shift, and ensure that they are in good working order.</p> <p>PC2. Perform a visual inspection of the equipment and report immediately to the engineer or other competent person appointed for the purpose any defect which he has noticed in the engine, drum, rope or other appliances under his charge.</p> <p>PC3. Guard and secure the haulage engine/equipment to prevent any unauthorized person to enter the engine-room or in any way to interfere with the engine or signal</p> <p>PC4. Get acquainted with, and carefully attend to, the prescribed code of signals. The haulage operator shall not start the engine until he has received the proper signal to do so. If the signal is indistinct, he shall not start the engine until it has been repeated and he clearly understands it.</p> <p>PC5. As the in-charge of tubs or set of tubs, which is intended to be sent up any haulage plane or incline on which drags or back-stays are required to be used, ensure that the drag or back-stay is secured before such tub or set of tubs is set in motion.</p> <p>PC6. Ensure that no unauthorized person rides on any tub.</p> <p>PC7. Ensure that the safety catches of all such tubs are properly secured before a train of side-tipping tubs is set in motion.</p> <p>PC8. Knowledge of dumping, active dump/ stable dump etc</p>

**MIN/N 0439      Prepare Haulage**

<b>Recording details</b>	<p>PC9. Maintain a checking/maintenance logbook to record all activities performed before starting the Haulage</p> <p>PC10. Inform supervisor of problems that are beyond scope of his role.</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Regulatory context (knowledge of safety guidelines specified by Director General of Mine Safety (DGMS))</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. Different types of mines and detail of the mine he is working in</p> <p>KA2. Mine Organisation, time keeping, need for discipline and punctuality</p> <p>KA3. Galleries in underground mine, dressing of roof, stable and unstable strata etc.</p> <p>KA4. Standing orders in force at the mine. Safety in the vicinity of machinery</p> <p>KA5. Shot-firing and Safety regulations. How and where to take shelter</p> <p>KA6. Duties of workmen</p> <p>KA7. Provision of wages, working hours and accident compensation as per Mines act</p> <p>KA8. Knowledge of mining safety procedures</p> <p>KA9. Impact of violation of safely procedures</p>
<b>A. Organizational Context (Knowledge of the company / organization and its processes)</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Job specific documents e.g. daily maintenance checklist and importance of the same</p> <p>KB2. Risk and impact of not following defined procedures/work instructions</p> <p>KB3. Escalation matrix for reporting identified problems</p> <p>KB4. Implications of delays in process to the company</p> <p>KB5. Locally prepared emergency response /disaster management plan.</p> <p>KB6. Reporting/ Logbook to record activities</p>
<b>C. Technical / Domain Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KC1. Different type of hauling systems (e.g. direct haulage, endless haulage, main and tail haulage, man-riding haulage)</p> <p>KC2. Code of signals in underground mines as required by the statute and as prescribed by the manager of the mine</p> <p>KC3. Visual signals an audio alarms and their mechanism</p> <p>KC4. Layout, working and purpose of all control levers, switches</p> <p>KC5. Control units of different type (electrical/ mechanical/ instrumentation based)</p>

**MIN/N 0439      Prepare Haulage**

	<p>KC6. Electrical and mechanical components of haulage systems</p> <p>KC7. Different types of couplings used in haulage systems</p> <p>KC8. Gears, gearboxes and transmission system</p> <p>KC9. Lubrication system of haulage and different specifications of lubricants required</p> <p>KC10. Braking mechanism and operation</p> <p>KC11. Controlling the power of control and resistance system</p> <p>KC12. Check all the hydraulic circuits for travelling and loading operations</p> <p>KC13. Safety mechanisms of haulage systems</p> <ul style="list-style-type: none"> <li>• Electrical - overload, tripping, earth leak etc.</li> <li>• Fencing and guards</li> <li>• Automatic locking of haulage drum</li> </ul> <p>KC14. Common troubles and remedies</p>
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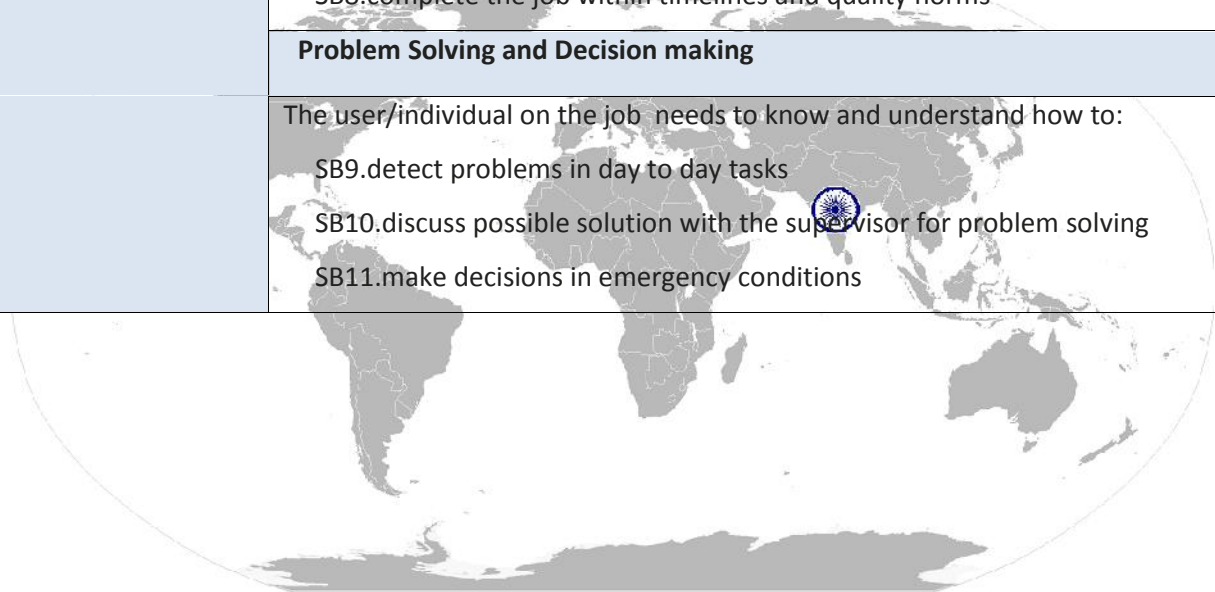
**Skills (S)**

<b>A. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Note down observations (if any)</p> <p>SA2. Fill out administrative forms</p>
	<b>Reading Skills</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA3. Read operators' manual</p> <p>SA4. Understand and analyse the available data about the site</p> <p>SA5. Read and comprehend banners /signage</p>
	<b>Oral Communication (Listening and Speaking skills)</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA6. Communicate with supervisors and peers in a proper manner adhering to the values of respect for individual</p>
<b>B. Professional Skills</b>	<b>Plan and Organize</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. Plan and organize the work order and jobs</p> <p>SB2. Organize all process manuals so that sorting/ accessing information is</p>



MIN/N 0439      **Prepare Haulage**

	easy
	<b>Judgment and Critical Thinking</b>
	The user/individual on the job needs to know and understand how to: SB3. use common sense and make judgments during day to day basis SB4. use reasoning skills to identify and resolve basic problems SB5. use intuition to detect any potential problems which could arise
	<b>Desire to learn and take initiatives</b>
	The user/individual on the job needs to know and understand how to: SB6. follow instructions and work on areas of improvement identified SB7. complete the assigned tasks with minimum supervision SB8. complete the job within timelines and quality norms
	<b>Problem Solving and Decision making</b>
	The user/individual on the job needs to know and understand how to: SB9. detect problems in day to day tasks SB10. discuss possible solution with the supervisor for problem solving SB11. make decisions in emergency conditions

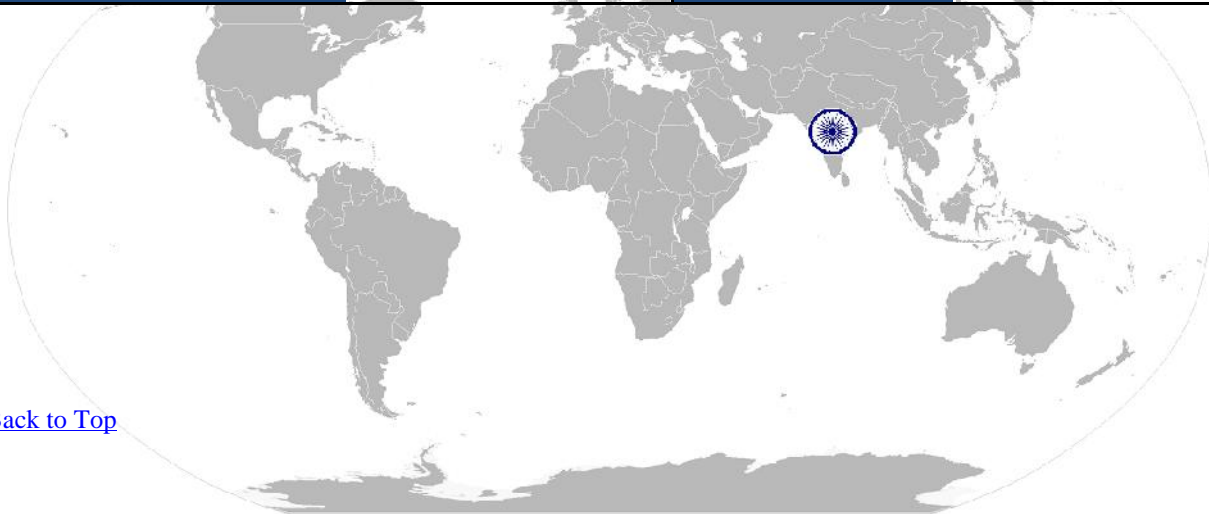


MIN/N 0439

Prepare Haulage

## NOS Version Control

<b>NOS Code</b>	MIN/N 0439		
<b>Credits(NSQF)</b>	TBD	<b>Version number</b>	1.0
<b>Sector</b>	Mining	<b>Drafted on</b>	15/12/2014
<b>Sub-sector</b>	Underground mines	<b>Last reviewed on</b>	24/03/2015
<b>Occupation</b>	Mining Operations	<b>Next review date</b>	24/03/2017



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# National Occupational Standard



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## Overview

This unit is about Performing the Haulage for activities that need to be carried out during a shift.

**MIN/ N 0440 Perform Haulage Operations**

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<b>Unit Code</b>	<b>MIN/ N 0440</b>
<b>Unit Title (Task)</b>	<b>Perform Haulage Operations</b>
<b>Description</b>	This unit is about performing Haulage operation
<b>Scope</b>	This OS unit/task covers the following: <ul style="list-style-type: none"> <li>Operate Haulage System</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Operate Haulage system</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Keep the haulage engine and apparatus connected therewith properly cleaned and oiled, and the engine-room clean and free of inflammable material.</p> <p>PC2. Adjust the torque and speed to account for various loads by manipulating the gearbox/ transmission system as required</p> <p>PC3. Cut off power and secure engine with brake if required (e.g. end of shift, etc.)</p> <p>PC4. Ensure that the stop- block are blocking way, before allowing any tub to be brought on to tope landing; and shall cause tubs to be securely coupled up to each other and to rope or chain, before the stop block is opened. In case any alternative safety appliance is provided, ensure its use on every such occasion.</p> <p>PC5. Ensure that that no person remains in a position of danger at or near such stopping place while the rope is in motion.</p> <p>PC6. Keep the headlights of the haulage machine continuously at 'ON' position during the operation of the machine</p> <p>PC7. Isolate the haulage engine when no haulage is being performed</p> <p>PC8. Secure Haulage through braking mechanism if it is left standing on gradient</p> <p>PC9. Sound alarm before starting the Haulage machine through pre- start audible warning, alert all persons in the vicinity and give sufficient time to move away to a safe place. When Haulage is in operation no one shall be allowed to be present in front and behind the machine frame where he is not likely to be visible to the operator</p> <p>PC10. Facilitate safe and proper maintenance of Haulage by bringing it to rest and</p>

**MIN/ N 0440 Perform Haulage Operations**

	<p>cutting of power before undertaking any repair, servicing or adjustment.</p> <p>Before carrying out any maintenance work, it shall be secured with suitable support</p> <p>PC11. Ensure that haulage is not used for transporting long materials like ropes, bars, for pushing or pulling bulky materials like tubs, pumps etc.</p> <p>PC12. Minor Maintenance Record:</p> <ul style="list-style-type: none"> <li>• Number of hours the haulage is in operation.</li> <li>• Number of hours the haulage is in breakdown/maintenance.</li> <li>• Record of the basic physical and mechanical condition of the haulage at the start of the shift.</li> </ul>
<b>Knowledge and Understanding (K)</b>	
<p><b>A. Regulatory context (knowledge of safety guidelines specified by Director General of Mine Safety (DGMS))</b></p>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. Different types of mines and detail of the mine he is working in</p> <p>KA2. Mine Organisation, time keeping, need for discipline and punctuality</p> <p>KA3. Galleries in underground mine, dressing of roof, stable and unstable strata etc.</p> <p>KA4. Standing orders in force at the mine. Safety in the vicinity of machinery</p> <p>KA5. Shot-firing and Safety regulations. How and where to take shelter</p> <p>KA6. Duties of workmen</p> <p>KA7. Provision of wages, working hours and accident compensation as per Mines act</p> <p>KA8. Knowledge of mining safety procedures</p> <p>KA9. Impact of violation of safely procedures</p>
<p><b>B. Organizational Context (Knowledge of the company / organization and its processes)</b></p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. Types of documentation in organization e.g. daily maintenance checklist and importance of the same</p> <p>KB2. Risk and impact of not following defined procedures/work instructions</p> <p>KB3. Rules and regulations of mine as per standard operating procedure (SOP)</p> <p>KB4. Risk and impact of not following company's SOP</p> <p>KB5. Escalation matrix for reporting identified problems</p> <p>KB6. Locally prepared emergency response /disaster management plan.</p>

**MIN/ N 0440 Perform Haulage Operations**

	KB7. Reporting/ Logbook to record activities
<b>C. Technical/ Domain Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KC1. Different type of hauling systems (e.g. direct haulage, endless haulage, main and tail haulage, man-riding haulage)</p> <p>KC2. Code of signals in underground mines as required by the statute and as prescribed by the manager of the mine</p> <p>KC3. Visual signals an audio alarms and their mechanism</p> <p>KC4. Layout, working and purpose of all control levers, switches</p> <p>KC5. Control units of different type (electrical/ mechanical/ instrumentation based)</p> <p>KC6. Electrical and mechanical components of haulage systems</p> <p>KC7. Different types of couplings used in haulage systems</p> <p>KC8. Gears, gearboxes and transmission system</p> <p>KC9. Lubrication system of haulage and different specifications of lubricants required</p> <p>KC10. Braking mechanism and operation</p> <p>KC11. Controlling the power of control and resistance system</p> <p>KC12. Check all the hydraulic circuits for travelling and loading operations</p> <p>KC13. Safety mechanisms of haulage systems</p> <ul style="list-style-type: none"> <li>• Electrical - overload, tripping, earth leak etc.</li> <li>• Fencing and guards</li> <li>• Automatic locking of haulage drum</li> </ul>
<b>Skills (S) [Optional]</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. Note down observations (if any)</p> <p>SA2. Fill out administrative forms</p>
	<b>Reading Skills</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA3. Read operators' manual</p> <p>SA4. Understand and analyse the available data about the site</p> <p>SA5. Read and comprehend banners /signage</p>

**MIN/ N 0440 Perform Haulage Operations**

	<b>Oral Communication (Listening and Speaking skills)</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA6. Communicate with supervisors and peers in a proper manner adhering to the values of respect for individual</p>
<b>B. Professional Skills</b>	<b>Plan and Organize</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. Plan and organize the work order and jobs</p> <p>SB2. Organize all process manuals so that sorting/ accessing information is easy</p>
	<b>Judgment and Critical Thinking</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB3. Use common sense and make judgments during day to day basis</p> <p>SB4. Use reasoning skills to identify and resolve basic problems</p> <p>SB5. Use intuition to detect any potential problems which could arise</p>
	<b>Desire to learn and take initiatives</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB6. Follow instructions and work on areas of improvement identified</p> <p>SB7. Complete the assigned tasks with minimum supervision</p> <p>SB8. Complete the job within timelines and quality norms</p>
	<b>Problem Solving and Decision making</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB9. Detect problems in day to day tasks</p> <p>SB10. Discuss possible solution with the supervisor for problem solving</p> <p>SB11. Make decisions in emergency conditions</p>

MIN/ N 0440 Perform Haulage Operations

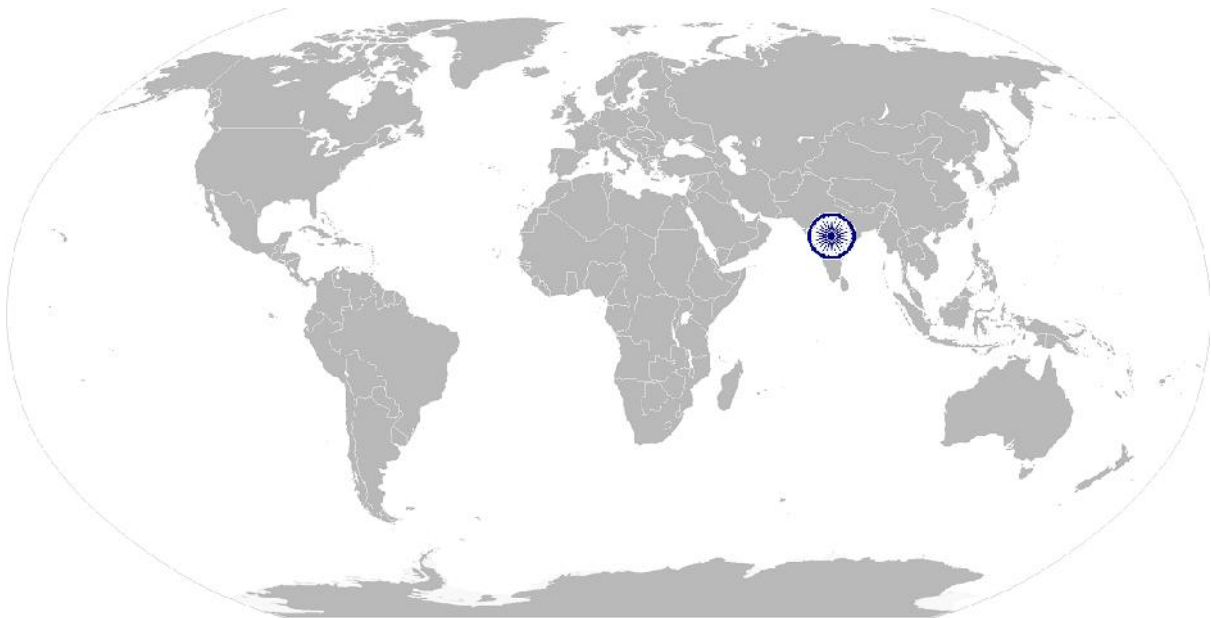
**NOS Version Control**

NOS Code	MIN/N 0440		
Credits(NSQF)	TBD	Version number	1.0
Sector	Mining	Drafted on	15/12/2014
Sub-sector	Underground Mines	Last reviewed on	24/03/2015
Occupation	Mining Operations	Next review date	24/03/2017

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# National Occupational Standard







## **Overview**

**This unit is about health and safety measures critical in mines**

MIN/ N0901 Health and Safety

National Occupational Standard	<b>Unit Code</b>	MIN/N 0901
	<b>Unit Title (Task)</b>	Health and Safety
	<b>Description</b>	This unit is about health and safety measures critical in mines
	<b>Scope</b>	This OS unit/task covers the following: <ul style="list-style-type: none"> <li>Health and safety measures critical in mines</li> </ul>
	<b>Performance Criteria (PC) w.r.t. the Scope</b>	
	<b>Element</b>	<b>Performance Criteria</b>
	<b>Safety, Security and Administrative</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Comply with occupational health and safety regulations adopted by the employer.</p> <p>PC2. Follow mining operations procedures with respect to materials handling and accidents</p> <p>PC3. Follow the correct safety steps in case of accident or major failure</p> <p>PC4. Comply with safety regulations and procedures in case of fire hazard.</p> <p>PC5. Operate various grades of fire extinguishers.</p> <p>PC6. Work responsibly and as safe and careful as possible so as not to put the health and safety of self or others at risk, including members of the public</p> <p>PC7. Perform storage and transport of hazardous materials compliant with safety guidelines prescribed by DGMS.</p> <p>PC8. Deal with misfires as per statutory requirement</p> <p>PC9. Identify characteristics of post-blast fumes and take necessary precautions.</p> <p>PC10. Wears safety gear such as hard hat, respiratory protection, eye protection, ear protection</p> <p>PC11. Follow the manufacturer’s instructions for care and safe operation of the equipment.</p>
	<b>Knowledge and Understanding (K)</b>	

**MIN/ N0901 Health and Safety**

<p><b>A. Regulatory context</b> (knowledge of safety guidelines specified by Director General of Mine Safety (DGMS))</p>	<p>The user/individual on the job needs to know and understand:</p> <ul style="list-style-type: none"> <li>KA1. Benching in quarries, Dressing of overhangs, undercuts, Fencing</li> <li>KA2. First aid and Hygiene</li> <li>KA3. Code of traffic in specific areas of mine. Significance of fences</li> <li>KA4. Standing orders in force at the mine. Safety in the vicinity of machinery</li> <li>KA5. Shot-firing and Safety regulations. How and where to take shelter</li> <li>KA6. Knowledge of mining safety procedures</li> <li>KA7. Impact of violation of safety procedures</li> <li>KA8. Locally prepared Emergency Preparedness / Disaster Management Plan.</li> <li>KA9. Environmental impact of mining</li> <li>KA10. Sources of dust, noise and vibration and measures to minimise</li> <li>KA11. Hazardous material safety and security rules and regulations as prescribed by DGMS</li> <li>KA12. Code of practice for safe handling and transport of dangerous material and heavy equipment.</li> </ul>
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## NOS Version Control

<b>NOS Code</b>	MIN/N 0901		
<b>Credits(NSQF)</b>	TBD	<b>Version number</b>	1.0
<b>Sector</b>	Mining	<b>Drafted on</b>	15/12/2014
<b>Sub-sector</b>	Underground Mines	<b>Last reviewed on</b>	24/03/2015
<b>Occupation</b>	Mining Operations	<b>Next review date</b>	24/03/2017



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## CRITERIA FOR ASSESSMENT OF TRAINEES

**Job Role** Haulage Operator

**Qualification Pack** MIN/Q 0413

**Sector Skill Council** Mining

### **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. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training centre (as per assessment criteria below)
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre based on this criteria
5. To pass the Qualification Pack, every trainee should score a minimum of 70% in every NOS
6. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack

		<b>Marks Allocation</b>			
		<b>Total Mark (100)</b>	<b>Out Of</b>	<b>Theory</b>	<b>Skills Practical</b>
1. MIN/N 0439(Prepare Haulage)	PC1. Examine the engine, its brake and all appliances in his charge at the beginning of his shift, and ensure that they are in good working order.	<b>35</b>	4	2	2
	PC2. Perform a visual inspection of the equipment and report immediately to the engineer or other competent person appointed for the purpose any defect which he has noticed in the engine, drum, rope or other appliances under his charge.		3	2	1
	PC3. Guard and secure the haulage engine/equipment to prevent any unauthorized person to enter the engine-room or in any way to interfere with the engine or signal		3	2	1

	PC4. Get acquainted with, and carefully attend to, the prescribed code of signals. The haulage operator shall not start the engine until he has received the proper signal to do so. If the signal is indistinct, he shall not start the engine until it has been repeated and he clearly understands it.		3	2	1
	PC5. As the in-charge of tubs or set of tubs, which is intended to be sent up any haulage plane or incline on which drags or back-stays are required to be used, ensure that the drag or back-stay is secured before such tub or set of tubs is set in motion.		4	2	2
	PC6. Ensure that no unauthorized person rides on any tub.		4	2	2
	PC7. Ensure that the safety catches of all such tubs are properly secured before a train of side-tipping tubs is set in motion.		4	2	2
	PC8. Knowledge of dumping, active dump/ stable dump etc		4	2	2
	PC9. Maintain a checking/maintenance logbook to record all activities performed before starting the Haulage		3	2	1
	PC10. Inform supervisor of problems that are beyond scope of his role.		3	2	1
		<b>Total</b>	<b>35</b>	<b>20</b>	<b>15</b>
2. MIN/N 0440(Perform Haulage Operations)	PC1. Keep the haulage engine and apparatus connected therewith properly cleaned and oiled, and the engine-room clean and free of inflammable material.	<b>35</b>	2	1	1
	PC2. Adjust the torque and speed to account for various loads by manipulating the gearbox/ transmission system as required		3	1.5	1.5



	PC3. Cut off power and secure engine with brake if required (e.g. end of shift, etc.)		3	1.5	1.5
	PC4. Ensure that the stop- block are blocking way, before allowing any tub to be brought on to tope landing; and shall cause tubs to be securely coupled up to each other and to rope or chain, before the stop block is opened. In case any alternative safety appliance is provided, ensure its use on every such occasion.		3	1.5	1.5
	PC5. Ensure that that no person remains in a position of danger at or near such stopping place while the rope is in motion.		3	1.5	1.5
	PC6. Keep the headlights of the haulage machine continuously at 'ON' position during the operation of the machine		3	1.5	1.5
	PC7. Isolate the haulage engine when no haulage is being performed		3	1.5	1.5
	PC8. Secure Haulage through braking mechanism if it is left standing on gradient		3	2	1
	PC9. Sound alarm before starting the Haulage machine through pre- start audible warning, alert all persons in the vicinity and give sufficient time to move away to a safe place. When Haulage is in operation no one shall be allowed to be present in front and behind the machine frame where he is not likely to be visible to the operator		3	2	1
	PC10. Facilitate safe and proper maintenance of Haulage by bringing it to rest and cutting of power before undertaking any repair, servicing or adjustment. Before carrying out any maintenance work, it shall be secured with suitable support		3	2	1

	PC11. Ensure that haulage is not used for transporting long materials like ropes, bars, for pushing or pulling bulky materials like tubs, pumps etc.		3	2	1
	PC12. Minor Maintenance Record: <ul style="list-style-type: none"> <li>• Number of hours the haulage is in operation.</li> <li>• Number of hours the haulage is in breakdown/maintenance.</li> <li>• Record of the basic physical and mechanical condition of the haulage at the start of the shift.</li> </ul>		3	2	1
		<b>Total</b>	<b>35</b>	<b>20</b>	<b>15</b>
3. MIN/ N0901 (Health and Safety)	PC1. Comply with occupational health and safety regulations adopted by the employer.	<b>30</b>	3	2	1
	PC2. Follow mining operations procedures with respect to materials handling and accidents		3	2	1
	PC3. Follow the correct safety steps in case of accident or major failure		3	2	1
	PC4. Comply with safety regulations and procedures in case of fire hazard.		3	2	1
	PC5. Operate various grades of fire extinguishers.		3	2	1
	PC6. Work responsibly and as safe and careful as possible so as not to put the health and safety of self or others at risk, including members of the public		2	1.5	0.5
	PC7. Perform storage and transport of hazardous materials compliant with safety guidelines prescribed by DGMS.		2	1.5	0.5
	PC8. Deal with misfires as per statutory requirement		2	1	1
	PC9. Identify characteristics of post-blast fumes and take necessary precautions.		3	2	1
	PC10. Wears safety gear such as hard hat, respiratory protection, eye protection,		3	2	1

	ear protection			
	PC11. Follow the manufacturer's instructions for care and safe operation of the equipment.		3	2
		<b>Total</b>	<b>30</b>	<b>20</b>
				<b>10</b>